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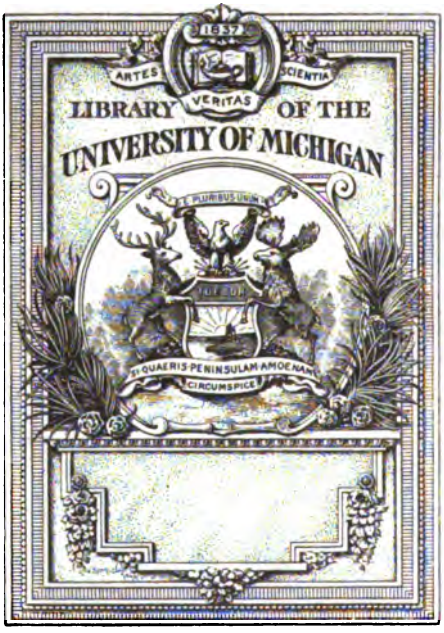
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PUBLICATIONS OF THE BUREAU OF FOREIGN COMMERCE.*

The publications of the Bureau of Foreign Commerce, Department of State, are:

I.—COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

II.—CONSULAR REPORTS, issued monthly, and containing miscellaneous reports from diplomatic and consular officers.

III.—ADVANCE SHEETS, CONSULAR REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the newspaper press, commercial and manufacturing organizations, etc.

IV.—EXPORTS DECLARED FOR THE UNITED STATES, issued quarterly, and containing the declared values of exports from the various consular districts to the United States for the preceding three months.

V.—SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

Following are the special publications issued by the Bureau prior to 1890:

Labor in Europe, 1878, one volume; Labor in Foreign Countries, 1884, three volumes; Commerce of the World and the Share of the United States Therein, 1879; Commerce of the World and the Share of the United States Therein, 1880–81; Declared Exports for the United States, First and Second Quarters, 1883; Declared Exports for the United States, Third and Fourth Quarters, 1883; Cholera in Europe in 1884, 1885; Trade Guilds of Europe, 1885; The Licorice Plant, 1885; Forestry in Europe, 1887; Emigration and Immigration, 1885–86 (a portion of this work was published as CONSULAR REPORTS No. 76, for the month of April, 1887); Rice Pounding in Europe, 1887; Sugar of Milk, 1887; Wool Scouring in Belgium, 1887; Cattle and Dairy Farming in Foreign Countries, 1888 (issued first in one volume, afterwards in two volumes); Technical Education in Europe, 1888; Tariffs of Central America and the British West Indies, 1890.

The editions of all these publications except Tariffs in Central America, etc., are exhausted and the Department is, therefore, unable to supply copies.

In 1890, the Department decided to publish reports on special subjects in separate form, to be entitled SPECIAL CONSULAR REPORTS. There are now the following SPECIAL CONSULAR REPORTS:

Vol. 1 (1890).—Cotton Textiles in Foreign Countries, Files in Spanish America, Carpet Manufacture in Foreign Countries, Malt and Beer in Spanish America, and Fruit Culture in Foreign Countries.

Vol. 2 (1890 and 1891).—Refrigerators and Food Preservation in Foreign Countries, European Emigration, Olive Culture in the Alpes Maritimes, and Beet-Sugar Industry and Flax Cultivation in Foreign Countries.

Vol. 3 (1891).—Streets and Highways in Foreign Countries. (New edition, 1897.)

Vol. 4 (1891).—Port Regulations in Foreign Countries.

Vol. 5 (1891).—Canals and Irrigation in Foreign Countries. (New edition, 1898.)

Vol. 6 (1891 and 1892).—Coal and Coal Consumption in Spanish America, Gas in Foreign Countries, and India Rubber.

Vol. 7 (1892).—The Stave Trade in Foreign Countries and Tariffs of Foreign Countries.

Vol. 8 (1892).—Fire and Building Regulations in Foreign Countries.

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* Formerly Bureau of Statistics. Name changed to Bureau of Foreign Commerce by order of the Secretary of State, July 1, 1897.

Vol. 9 (1892 and 1893).—Australian Sheep and Wool and Vagrancy and Public Charities in Foreign Countries.

Vol. 10 (1894).—Lead and Zinc Mining in Foreign Countries and Extension of Markets for American Flour. (New edition, 1897.)

Vol. 11 (1894).—American Lumber in Foreign Markets. (New edition, 1897.)

Vol. 12 (1895).—Highways of Commerce. (New edition, 1899.)

Vol. 13 (1896 and 1897).—Money and Prices in Foreign Countries.

Vol. 14 (1898).—The Drug Trade in Foreign Countries.

Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe, Rabbits and Rabbit Furs in Europe, and Cultivation of Ramie in Foreign Countries. Part II. Sericulture and Silk Reeling and Cultivation of the English Walnut.

Vol. 16 (1899).—Tariffs of Foreign Countries. Part I. Europe. Part II. America. Part III. Asia, Africa, Australasia, and Polynesia. Supplement (1900). Tariffs of Chile and Nicaragua.

Vol. 17 (1899).—Disposal of Sewage and Garbage in Foreign Countries; Foreign Trade in Coal Tar and By-Products.

Vol. 18 (1900).—Merchant Marine of Foreign Countries.

Vol. 19 (1900).—Paper in Foreign Countries; Uses of Wood Pulp.

Vol. 20 (1900).—Part I. Book Cloth in Foreign Countries, Market for Ready-Made Clothing in Latin America, Foreign Imports of American Tobacco, and Cigar and Cigarette Industry in Latin America. Part II. School Gardens in Europe. Part III. The Stave Trade in Foreign Countries.

Vol. 21 (1900).—Part I. Foreign Markets for American Coal. Part II. Vehicle Industry in Europe.

Of these SPECIAL CONSULAR REPORTS, Australian Sheep and Wool, Cotton Textiles in Foreign Countries; Disposal of Sewage, etc.; Files in Spanish America, Fire and Building Regulations, Gas in Foreign Countries, India Rubber, Lead and Zinc Mining, Malt and Beer in Spanish America, Port Regulations, Refrigerators and Food Preservation, Soap, etc.; Sericulture, etc.; Vagrancy, etc., are exhausted, and no copies can be supplied by the Department.

There was also published, in 1899, Proclamations and Decrees during the War with Spain, comprising neutrality circulars issued by foreign countries, proclamations by the President, orders of the War and Navy Departments, and war decrees of Spain.

Of the monthly CONSULAR REPORTS, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Bureau will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, the Department will forward franking labels to be used in lieu of postage in the United States, Canada, the Hawaiian Islands, and Mexico.

Persons receiving CONSULAR REPORTS regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to consular reports should be carefully addressed, "Chief, Bureau of Foreign Commerce, Department of State, Washington, U. S. A."

VALUES OF FOREIGN COINS AND CURRENCIES.

The following statements show the valuation of foreign coins, as given by the Director of the United States Mint and published by the Secretary of the Treasury, in compliance with the first section of the act of March 3, 1873, viz: "That the value of foreign coins, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the value of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the 1st day of January by the Secretary of the Treasury."

In compliance with the foregoing provisions of law, annual statements were issued by the Treasury Department, beginning with that issued on January 1, 1874, and ending with that issued on January 1, 1890. Since that date, in compliance with the act of October 1, 1890, these valuation statements have been issued quarterly, beginning with the statement issued on January 1, 1891.

The fact that the market exchange value of foreign coins differs in many instances from that given by the United States Treasury has been repeatedly called to the attention of the Bureau of Foreign Commerce. An explanation of the basis of the quarterly valuations was asked from the United States Director of the Mint, and under date of February 7, 1898, Mr. R. E. Preston makes the following statement:

"When a country has the single gold standard, the value of its standard coins is estimated to be that of the number of grains fine of gold in them, 480 grains being reckoned equivalent to $20.67 in United States gold, and a smaller number of grains in proportion. When a country has the double standard, but keeps its full legal-tender silver coins at par with gold, the coins of both gold and silver are calculated on the basis of the gold value.

"The value of the standard coins of countries with the single silver standard is calculated to be that of the average market value of the pure metal they contained during the three months preceding the date of the proclamation of their value in United States gold by the Secretary of the Treasury. The value of the gold coins of silver-standard countries is calculated at that of the pure gold they contain, just as if they had the single gold standard.

"These valuations are used in estimating the values of all foreign merchandise exported to the United States. The value of the Indian rupee, although calculated according to law at the value of the pure metal contained therein, has a commercial value above the value of the silver bullion; consequently the value for customs purposes is determined in each case by the consular certificates attached to the invoice of exports from that country to the United States."

The following statements, running from January 1, 1874, to October 1, 1900, have been prepared to assist in computing the values in American money of the trade, prices, values, wages, etc., of and in foreign countries, as given in consular and other reports. The series of years are given so that computations may be made for each year in the proper money values of such year. In hurried computations, the reductions of foreign currencies into American currency, no matter for how many years, are too often made on the bases of latest valuations. When it is taken into account

that the ruble of Russia, for instance, fluctuated from 77.17 cents in 1874 to 37.4 cents in April, 1897, such computations are wholly misleading.. All computations of values, trade, wages, prices, etc., of and in the "fluctuating-currency countries" should be made in the values of their currencies in each year up to and including 1890, and in the quarterly valuations thereafter.

To meet typographical requirements, the quotations for the years 1876, 1877, 1879, 1881, 1882, and 1891–95 are omitted, these years being selected as showing the least fluctuations when compared with years immediately preceding and following.

To save unnecessary repetition, the estimates of valuations are divided into three classes, viz: (A) countries with fixed currencies, (B) countries with fluctuating currencies, and (C) quarterly valuations of fluctuating currencies.

A.—*Countries with fixed currencies.*

The following official (United States Treasury) valuations of foreign coins do not include "rates of exchange."

Countries.	Standard.	Monetary unit.	Value in U.S. gold.	Coins.
Argentine Republic*.	Gold and silver..	Peso.....	$0.96,5	Gold—Argentine ($4.82,4) and ½ Argentine; silver—peso and divisions.
Austria-Hungary†.....	Gold	Crown.....	.20,3	Gold—20 crowns ($4.05,2) and 10 crowns.
Belgium	Gold and silver..	Franc.....	.19,3	Gold—10 and 20 franc pieces; silver—5 francs.
Brazil.....	Gold	Milreis.....	.54,6	Gold—5, 10, and 20 milreis; silver—½, 1, and 2 milreis.
British North America (except Newfoundland).	.....do	Dollar.....	1.00	
British Honduras.....	.....do	.....do	1.00	
Chile.....	.....do	Peso.....	.36,5	Gold—escudo ($1.25), doubloon ($3.65), and condor ($7.30); silver—peso and divisions.
Costa Rica.....	.....do	Colon.....	.46,5	Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centisimos.
Cuba	Gold and silver..	Peso.....	.92,6	Gold—doubloon ($5.01,7); silver—peso (60 cents).
Denmark	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Egypt.....	.....do	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland.....	.....do	Mark.....	.19,3	Gold—10 and 20 marks ($1.93 and $3.85,9).
France	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Gold	Mark.....	.23,8	Gold—5, 10, and 20 marks.
Great Britain.....	.....do	Pound sterling...	4.86,6½	Gold—sovereign (pound sterling) and half sovereign.
Greece.....	Gold and silver..	Drachma.....	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti	.....do	Gourde.....	.96,5	Silver—gourde.
Italy.....	.....do	Lira	.19,3	Gold—5, 10, 20, 50, and 100 lire; silver—5 lire.
Japan‡.....	Gold	Yen.....	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia	.....do	Dollar.....	1.00	
Netherlands§.....	Gold and silver..	Florin	.40,2	Gold—10 florins; silver—½, 1, and 2½ florins.
Newfoundland	Gold	Dollar.....	1.01,4	Gold—$2 ($2.02,7).
Portugal.....	.....do	Milreis.....	1.08	Gold—1, 2, 5, and 10 milreis.
Russia‖.....	.....do	Ruble.....	.51,5	Gold—imperia. ($7.718) and ½ imperial ($3.90); silver—¼, ½, and 1 ruble.
Spain.....	Gold and silver..	Peseta.....	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden and Norway.	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Switzerland	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Gold	Piaster.....	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay	Gold	Peso.....	1.03,4	Gold—peso; silver—peso and divisions.
Venezuela.....	Gold and silver..	Bolivar.....	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

* In 1874 and 1875, the gold standard prevailed.

† The gold standard was adopted October 1, 1892. (See CONSULAR REPORTS No. 147, p. 623.) Values are still, however, frequently expressed in the florin or gulden, which is worth 2 crowns or 40.6 cents.

‡ Gold standard adopted October 1, 1897. (See CONSULAR REPORTS No. 201, p. 259.)

§ See note to table of fluctuating currencies.

‖ For an account of the adoption of the gold standard, see Review of the World's Commerce, 1896-97, p. 254.

B.—*Countries with fluctuating currencies, 1874–1890.*

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1874.	1875.	1878.	1880.	1883.	1884.
Austria-Hungary*.	Silver	Florin	$0.47,6	$0.45,3	$0.45,3	$0.41,3	$0.40,1	$0.39,8
Bolivia	do	Dollar until 1880; boliviano thereafter.	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Central America	do	Peso	.96,5	.91,8	.91,8	.83,6		
China	Silver	Haikwan tael	1.61	1.61				
Colombia	do	Peso	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Ecuador	do	do	.96,5	.91,8	.91,8	.83,6	.81,2	.80,6
Egypt†	Gold	Pound (100 piasters).			4.97,4	4.97,4	4.90	4.90
India	Silver	Rupee	.45,8	.43,6	.43,6	.39,7	.38,6	.38,3
Japan	Gold	Yen	.99,7	.99,7	.99,7	.99,7		
	Silver						.87,6	.86,9
Mexico	do	Dollar	1.04,7½	.99,8	.99,8	.90,9	.88,2	.87,5
Netherlands‡	Gold and Silver.	Florin	.40,5	.38,5	.38,5	.40,2		
Peru	Silver	Sol	.92,5	.91,8	.91,8	.83,6	.81,2	.80,6
Russia	do	Ruble	.77,17	.73,4	.73,4	.66,9	.65	.64,5
Tripoli	do	Mahbub of 20 piasters.	.87,09	.82,9	.82,9	.74,8	.73,3	.72,7

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1885.	1886.	1887.	1888.	1889.	1890.
Austria-Hungary*.	Silver	Florin	$0.39,3	$0.37,1	$0.35,9	$0.34,5	$0.33,6	$0.42
Bolivia	do	Dollar until 1880; boliviano thereafter.	.79,5	.75,1	.72,7	.69,9	.68	.85
Central America	do	Peso				.69,9	.68	.85
Colombia	do	do	.79,5	.75,1	.72,7	.69,9	.68	.85
Ecuador	do	do	.79,5	.75,1	.72,7	.69,9	.68	.85
Egypt†	Gold	Pound (100 piasters).	4.90	4.90	4.94,3	4.94,3	4.94,3	4.94,3
India	Silver	Rupee	.37,8	.35,7	.34,6	.32,2	.32,3	.40,4
Japan	Gold	Yen			.99,7	.99,7	.99,7	.99,7
	Silver		.85,8	.81	.78,4	.75,3	.73,4	.91,7
Mexico	do	Dollar	.86,4	.81,6	.79	.75,9	.73,9	.92,3
Peru	Silver	Sol	.79,5	.75,1	.72,7	.69,9	.68	.85
Russia	do	Ruble	.63,6	.60,1	.58,2	.55,9	.54,4	.68
Tripoli	do	Mahbub of 20 piasters.	.71,7	.67,7	.65,6	.63	.61,4	.76,7

* The silver standard prevailed in Austria-Hungary up to 1892. The law of August 2 of that year (see CONSULAR REPORTS No. 147, p. 623) established the gold standard.

† The Egyptian pound became fixed in value at $4.94,3 in 1887.

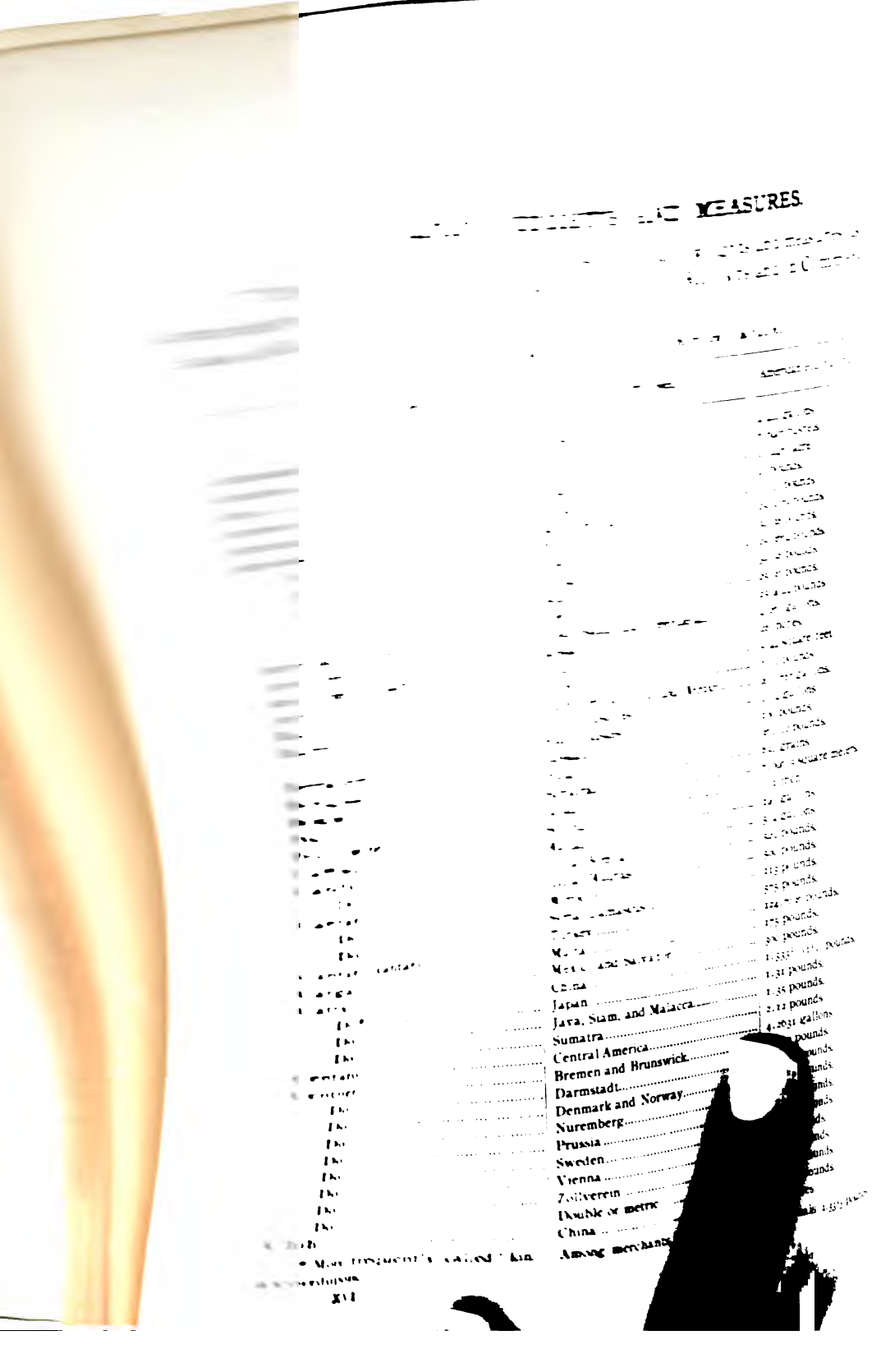
‡ The Netherlands florin fluctuated up to the year 1880, when it became fixed at 40.2 cents.

C.—*Quarterly valuations of fluctuating currencies.*

Countries.	Monetary unit.	1897.				1898.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Bolivia	Silver boliviano.	$0.47,4	$0.46,8	$0.44,3	$0.41,2	$0.42,4	$0.40,9	$0.41,8	$0.43,6
Central America.	Silver peso	.47,4	.46,5	.44,3	.41,2	.41,4	.40,9	.41,8	.43,6
China	Amoy tael	.76,7	.75,7	.71,7	.66,4	.68,5	.66,2	.67,6	.70,6
	Canton tael	.76,5	.75,5	.71,5	.66,4	.68,3	.66	.67,4	.70,4
	Chefoo tael	.73,3	.72,4	.68,6	.63,7	.65,5	.63,3	.64,6	.67,5
	Chinkiang tael	.74,9	.73,9	.70	.65,1	.66,9	.64,6	.66	.69
	Fuchau tael	.70,9	.70	.66,3	.61,6	.63,4	.61,2	.62,5	.65,3
	Haikwan tael	.78	.77	.73,1	.67,8	.69,7	.67,3	.68,8	.71,8
	Hankau tael	.71,7	.70,8	.67,1	.62,3	.64,1	.61,9	.63,2	.66
	Ningpo tael	.73,7	.72,8	.68,9	.64	.64,3	.63	.65	.67,9
	Niuchwang tael.	.71,9	.71	.67,2	.62,5	.65,9	.62	.63,4	.66,2
	Shanghai tael	.70	.69,1	.65,5	.60,8	.62,6	.60,4	.61,7	.64,5
	Swatow tael	.70,8	.69,9	.66,2	.61,5	.63,3	.61,1	.62,4	.65,2
	Takao tael	.77,2	.76,2	.72,2	.67	.66	.66,6	.68	.71
	Tientsin tael	.74,3	.73,4	.69,5	.64,6	.66,4	.64,1	.65,5	.68,4
Colombia	Silver peso	.47,4	.46,8	.44,3	.41,2	.42,4	.40,9	.41,8	.43,6
Ecuador	....do....	.47,4	.46,8	.44,3	.41,2	.42,4	.40,9	.41,8	.43,6
India*	Silver rupee	.22,5	.22,2	.21,1	.19,6	.20,1	.19,1	.19,9	.20,7
Japan	Silver yen	.51,1	.50,5						
Mexico	Silver dollar	.51,5	.50,8	.48,2	.44,6	.46	.44,4	.45,4	.47,4
Persia	Silver kran	.08,7	.08,6	.08,2	.07,6	.07,8	.07,5	.07,7	.08
Peru	Silver sol	.47,4	.46,8	.44,3	.41,2	.42,4	.40,9	.41,8	.43,6
Russia	Silver ruble	.37,9	.37,4						

Countries.	Monetary unit.	1899.				1900.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Bolivia	Silver boliviano.	$0.43,9	$0.43,4	$0.44,3	$0.43,6	$0.42,7	$0.43,6	$0.43,8	$0.45,1
Central America.	Silver peso	.43,9	.43,4	.44,3	.43,6	.42,7	.43,6	.43,8	.45,1
China	Amoy tael	.71	.70,2	.71,6	.70,5	.69,1	.70,5	.70,9	.72,9
	Canton tael	.70,8	.70	.71,4	.70,3	.68,9	.70,3	.70,7	.72,7
	Chefoo tael	.67,9	.67,2	.68,4	.67,4	.66,1	.67,4	.67,8	.69,7
	Chinkiang tael	.69,3	.68,6	.69,9	.68,9	.67,5	.68,8	.69,3	.71,2
	Fuchau tael	.65,6	.65	.66,2	.65,2	.64	.65,2	.65,6	.67,4
	Haikwan tael	.72,2	.71,4	.72,8	.71,8	.70,3	.71,7	.72,1	.74,2
	Hankau tael	.66,4	.65,7	.67	.66	.64,7	.65,9	.66,3	.68,2
	Ningpo tael	.68,2	.67,5	.68,8	.67,8	.66,5	.67,7	.68,2	.70,1
	Niuchwang tael.	.66,5	.65,9	.67,1	.66,1	.64,8	.66,1	.66,5	.68,4
	Shanghai tael	.64,8	.64,1	.65,4	.64,4	.63,1	.64,4	.64,8	.66,6
	Swatow tael	.65,5	.64,9	.66,1	.65,1	.63,9	.65,1	.65,5	.67,4
	Takao tael	.71,4	.70,7	.72	.71	.69,6	.70,9	.71,4	.73,4
	Tientsin tael	.68,8	.68	.69,4	.68,3	.67	.68,3	.68,7	.70,7
Colombia	Silver peso	.43,9	.43,4	.44,3	.43,6	.42,7	.43,6	.43,8	.45,1
Ecuador	....do....	.43,9	.43,4	.44,3	.43,6	.42,7	.43,6	.43,8	.45,1
India*	Silver rupee	.20,8	.20,6	.21	.20,7	.20,3	.20,7	.20,8	.32,4
Mexico	Silver dollar	.47,7	.47,2	.48,1	.47,4	.46,4	.47,3	.47,6	.49,0
Persia	Silver kran	.08,1	.08	.08,2	.08	.07,9	.08	.08,1	.08,3
Peru	Silver sol	.43,9	.43,4	.44,3	.43,6	.42,7	.43,6	.43,8	.48,7

*The commercial value of the rupee to be determined by consular certificate.



Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Coyan	Sarawak	3,098 pounds.
Do	Siam (Koyan)	2,667 pounds.
Cuadra	Argentine Republic	4.2 acres.
Do	Paraguay	78.9 yards.
Do	Paraguay (square)	8.077 square feet.
Do	Uruguay	Nearly 2 acres.
Cubic meter	Metric	35.3 cubic feet.
Cwt. (hundredweight)	British	112 pounds.
Dessiatine	Russia	2.6997 acres.
Do	Spain	1.599 bushels.
Drachme	Greece	Half ounce.
Egyptian weights and measures	(*See* CONSULAR REPORTS No. 144.)	
Fanega (dry)	Central America	1.5745 bushels.
Do	Chile	2.575 bushels.
Do	Cuba	1.599 bushels.
Do	Mexico	1.54728 bushels.
Do	Morocco	Strike fanega, 70 lbs.; full fanega, 118 lbs.
Do	Uruguay (double)	7.776 bushels.
Do	Uruguay (single)	3.888 bushels.
Do	Venezuela	1.599 bushels.
Fanega (liquid)	Spain	16 gallons.
Feddan	Egypt	1.03 acres.
Frail (raisins)	Spain	50 pounds.
Frasco	Argentine Republic	2.5096 quarts.
Do	Mexico	2.5 quarts.
Frasila	Zanzibar	35 pounds.
Fuder	Luxemburg	264.17 gallons.
Garnice	Russian Poland	0.88 gallon.
Gram	Metric	15.432 grains.
Hectare	do	2.471 acres.
Hectoliter:		
Dry	do	2.838 bushels.
Liquid	do	26.417 gallons.
Joch	Austria-Hungary	1.422 acres.
Ken	Japan	6 feet.
Kilogram (kilo)	Metric	2.2046 pounds.
Kilometer	do	0.621376 mile.
Klafter	Russia	216 cubic feet.
Koku	Japan	4.9629 bushels.
Korree	Russia	3.5 bushels.
Kwan	Japan	8.28 pounds.
Last	Belgium and Holland	85.134 bushels.
Do	England (dry malt)	82.52 bushels.
Do	Germany	2 metric tons (4,480 pounds).
Do	Prussia	112.29 bushels.
Do	Russian Poland	113⅜ bushels.
Do	Spain (salt)	4,760 pounds.
League (land)	Paraguay	4,633 acres.
Li	China	2,115 feet.
Libra (pound)	Castilian	7,100 grains (troy).
Do	Argentine Republic	1.0127 pounds.
Do	Central America	1.043 pounds.
Do	Chile	1.014 pounds.
Do	Cuba	1.0161 pounds.
Do	Mexico	1.01465 pounds.
Do	Peru	1.0143 pounds.
Do	Portugal	1.011 pounds.
Do	Uruguay	1.0143 pounds.
Do	Venezuela	1.0161 pounds.
Liter	Metric	1.0567 quarts.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Livre (pound)	Greece	1.1 pounds.
Do	Guiana	1.0791 pounds.
Load	England (timber)	Square, 50 cubic feet: unhewn, 40 cubic feet: inch planks, 600 superficial feet.
Manzana	Costa Rica	1⅞ acres.
Do	Nicaragua and Salvador	1.727 acres.
Marc	Bolivia	0.507 pound.
Maund	India	82⅔ pounds.
Meter	Metric	39.37 inches.
Mil	Denmark	4.68 miles.
Do	Denmark (geographical)	4.61 miles.
Milla	Nicaragua and Honduras	1.1493 miles.
Morgen	Prussia	0.63 acre.
Oke	Egypt	2.7225 pounds.
Do	Greece	2.84 pounds.
Do	Hungary	3.0817 pounds
Do	Turkey	2.85418 pounds.
Do	Hungary and Wallachia	2.5 pints.
Pic	Egypt	21¼ inches.
Picul	Borneo and Celebes	135.64 pounds.
Do	China, Japan, and Sumatra	133⅓ pounds.
Do	Java	135.1 pounds.
Do	Philippine Islands	137.9 pounds.
Pie	Argentine Republic	0.9478 foot.
Do	Castile	0.91407 foot.
Pik	Turkey	27.9 inches.
Pood	Russia	36.112 pounds.
Pund (pound)	Denmark and Sweden	1.102 pounds.
Quarter	Great Britain	8.252 bushels.
Do	London (coal)	36 bushels.
Quintal	Argentine Republic	101.42 pounds.
Do	Brazil	130.06 pounds.
Do	Castile, Chile, Mexico, and Peru	101.61 pounds.
Do	Greece	123.2 pounds.
Do	Newfoundland (fish)	112 pounds.
Do	Paraguay	100 pounds.
Do	Syria	125 pounds.
Do	Metric	220.46 pounds.
Rottle	Palestine	6 pounds.
Do	Syria	5¾ pounds.
Sagen	Russia	7 feet.
Salm	Malta	490 pounds.
Se	Japan	0.02451 acres.
Seer	India	1 pound 13 ounces.
Shaku	Japan	11.9305 inches.
Sho	do	1.6 quarts.
Standard (St. Petersburg)	Lumber measure	165 cubic feet.
Stone	British	14 pounds.
Suerte	Uruguay	2,700 cuadras (see cuadra).
Sun	Japan	1.193 inches.
Tael	Cochin China	590.75 grains (troy).
Tan	Japan	0.25 acre.
To	do	2 pecks.
Ton	Space measure	40 cubic feet.
Tonde (cereals)	Denmark	3.94783 bushels.
Tondeland	do	1.36 acres.
Tsubo	Japan	6 feet square.
Tsun	China	1.41 inches.
Tunna	Sweden	4.5 bushels.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Tunnland	Sweden	1.22 acres.
Vara	Argentine Republic	34.1208 inches.
Do	Castile	0.914117 yard.
Do	Central America	32.87 inches.
Do	Chile and Peru	33.367 inches.
Do	Cuba	33.384 inches.
Do	Curaçao	33.375 inches.
Do	Mexico	33 inches.
Do	Paraguay	34 inches.
Do	Venezuela	33.384 inches.
Vedro	Russia	2.707 gallons.
Vergees	Isle of Jersey	71.1 square rods.
Verst	Russia	0.663 mile.
Vlocka	Russian Poland	41.98 acres.

METRIC WEIGHTS AND MEASURES.

Metric weights.

Milligram ($\frac{1}{1000}$ gram) equals 0.0154 grain.
Centigram ($\frac{1}{100}$ gram) equals 0.1543 grain.
Decigram ($\frac{1}{10}$ gram) equals 1.5432 grains.
Gram equals 15.432 grains.
Decagram (10 grams) equals 0.3527 ounce.
Hectogram (100 grams) equals 3.5274 ounces.
Kilogram (1,000 grams) equals 2.2046 pounds.
Myriagram (10,000 grams) equals 22.046 pounds.
Quintal (100,000 grams) equals 220.46 pounds.
Millier or tonnea—ton (1,000,000 grams) equals 2,204.6 pounds.

Metric dry measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.061 cubic inch.
Centiliter ($\frac{1}{100}$ liter) equals 0.6102 cubic inch.
Deciliter ($\frac{1}{10}$ liter) equals 6.1022 cubic inches.
Liter equals 0.908 quart.
Decaliter (10 liters) equals 9.08 quarts.
Hectoliter (100 liters) equals 2.838 bushels.
Kiloliter (1,000 liters) equals 1.308 cubic yards.

Metric liquid measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.0388 fluid ounce.
Centiliter ($\frac{1}{100}$ liter) equals 0.338 fluid ounce.
Deciliter ($\frac{1}{10}$ liter) equals 0.845 gill.
Liter equals 1.0567 quarts.
Decaliter (10 liters) equals 2.6418 gallons.
Hectoliter (100 liters) equals 26.417 gallons.
Kiloliter (1,000 liters) equals 264.18 gallons.

Metric measures of length.

Millimeter ($\frac{1}{1000}$ meter) equals 0.0394 inch.
Centimeter ($\frac{1}{100}$ meter) equals 0.3937 inch.
Decimeter ($\frac{1}{10}$ meter) equals 3.937 inches.
Meter equals 39.37 inches.

Decameter (10 meters) equals 393.7 inches.
Hectometer (100 meters) equals 328 feet 1 inch.
Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).
Myriameter (10,000 meters) equals 6.2137 miles.

Metric surface measures.

Centare (1 square meter) equals 1,550 square inches.
Are (100 square meters) equals 119.6 square yards.
Hectare (10,000 square meters) equals 2.471 acres

CONSULAR REPORTS.

COMMERCE, MANUFACTURES, ETC.

Vol. LXV. JANUARY, 1901. No. 244.

UNITED STATES COAL IN EUROPE.

Less than a year ago, when the possibilities of American coal competing with the English product were being considered, the matter was generally ridiculed by the English operator. Now that our coal is actually coming into competition with that of England, the British press is reluctantly admitting the virtues of the American product, as will be seen from the following, taken from a recent issue of the London Telegraph:

Basing their calculations on the tests so far made in American gas coal, the South Metropolitan Gas Company obtain results which justify the recent purchase they made of some 4,000 tons of this mineral for experimental purposes. The cost of Durham coal, which is the best English coal obtainable for gas-making purposes, is at the present time about 16s. ($3.89) per ton, free on board, and the freight to London is 4s. (97 cents) per ton, giving in round figures a total cost of 20s. ($4.87) per ton. The American article, including freight, touches about 27s. ($6.57) a ton. There is therefore a considerable margin in favor of British coal on the score of prime cost, and any counterbalancing advantage gained from the use of imported coal must lie in its better producing qualities and its superior yield of coke and other marketable residuals. Roughly speaking, a ton of Durham coal will produce from 10,000 to 10,500 cubic feet of gas. The American contractors hinted at between 14,000 and 15,000 cubic feet per ton as the yield of their supply, but, although the results show figures considerably exceeding those attaching to British coal, they fall much short of the American estimate. It is necessary, however, to note that experiment has so far been made with only a fraction of the 4,000 tons brought over, and fuller tests may materially affect the comparison one way or the other. Nor can the tests be regarded as thoroughly satisfactory, in that the American article has had a slight admixture of the British. In future experiments, this combination will be avoided and the imported coal taken on its merits entirely. On the whole, the test has proved more favorable than a similar one recently made in Paris.

Yesterday I was shown a letter from a leading Cardiff exporter, in which the statement was made that there would be further advances in the price of Welsh coals in consequence of the strike in the

anthracite mines in the United States. Such an excuse for further advances in the price of English and Welsh coals is not sufficient, from the fact that there is so far but a small tonnage of American coal coming here, and no anthracite at all. The facts are, the English operators think our coal will cease to be a competitor in this market during the American strike, and, having nothing to fear from the outside, they will advance the price of coal for speculative purposes.

JOSEPH I. BRITTAIN,
Consul.

NANTES, *September 21, 1900.*

UNITED STATES COAL IN NANTES.

The continued advance in the price of English coals, the shortness of the visible stock, and the approaching winter season are again causing apprehension here regarding the future supply. For months past, dealers have been buying cautiously, laboring under the delusion that the South African war was the only cause for the high price asked for English coal. Now, they realize that other causes have been affecting the market. The augmentation of the naval fleets of the various powers of the Old World, together with the growth in railroad building, with the increased demand for manufactured iron involved, have had considerable effect upon the coal market. In fact, the supply is not keeping pace with the demand on this side. Hence, dealers are again making inquiry concerning prices and quality of American coals. This is a good time for American exporters to prepare for foreign trade, quote prices, send samples, and specify time when coal can be delivered. They can not expect to obtain this market without an effort, as the English producer has had absolute control here for many generations, and the French dealer has become accustomed to English and Welsh coals—especially the latter—for steam and domestic purposes. If the American dealer can satisfy the French consumer as to quality, price, condition of coal, terms of sale, and time for delivery, he may succeed in capturing a share of the market.

During the year 1898, 1,027,304 tons entered this port, and during the year 1899, 1,175,455 tons, all of which came from Great Britain, excepting four or five cargoes from the United States. This morning I was shown a letter from one of the leading Cardiff coal exporters, in response to an inquiry for coal. The letter stated that owing to present conditions they could not make any new contracts. In the letter the prices quoted for best Welsh steam coal were 26s. to 28s. per ton, which would make the prices here, including freight

and insurance, about $7.75 and $8.25 per ton. The freight on a cargo of coal which recently arrived at St. Nazaire from Newport News was 15s. ($3.64) per ton. I am informed that the railway company which purchased this cargo of New River coal was pleased with the results. American exporters, in selecting agents here, should guard against French dealers who are interested in English mines. For example, some of the leading coal dealers in Nantes are assisted by English capitalists, and in order to do business they are almost obliged to sell English coal. In some instances, these dealers obtain all the information possible regarding American coals for the sole purpose of keeping their English backers posted, while the English mine owner also does all in his power to prevent the sale of American coal. He tells the French dealer the price will soon come down, that coal for the American Navy is bought in Wales, that the American coal makes too much smoke, that the mines are too far away, etc.

Some months ago, I had a number of cases of American coal sent here. It was analyzed and proved to be of excellent quality, some being very similar to the finest grades of Cardiff steam coal. The samples of anthracite coals sent were pronounced superior to any found in Great Britain. To show the increased interest in American coals, I am in possession of a letter from one of the leading railway companies of France—namely, the Chemins de Fer de l'État—asking for proposals to deliver 44,000 tons of good steam coal in four equal installments as follows: November and December, 1901, and January and February, 1902, to be delivered at La Rochelle, La Pallice, Rochefort, or Bordeaux. The percentage of small coal must be stated, all passing through a screen of 25 millimeters (0.98 inch) in diameter being regarded as small. The company will want samples submitted with the analysis, the samples to consist of about 5 kilograms (11 pounds) each. The location of the mines from which the samples are taken must be also stated, as well as the cost of freight and insurance. Every American mail brings letters of inquiry regarding the coal market here, but American dealers have not been willing, with few exceptions, to furnish samples. One dealer expressed surprise when he did not receive a cable order for a cargo, after he sent his price, without furnishing samples or knowing what kind of coal was wanted. In addition, he expected the cargo to be paid for before leaving America. A leading manufacturer of Nantes was recently induced to try a sample lot of American coal, with the assurance that it was the best steam-producing coal. The gentleman took 100 tons and found it to be a gas coal, containing more than 36 per cent volatile matter. He says he does not think he can use even the sample. Had he been furnished

with a trial lot of New River, George Creek, or coal of a similar quality, containing no greater per cent of volatile matter, this manufacturer would in all probability have become a purchaser of American coals, and would have recommended the same to all his friends. Under the circumstances, it will be difficult to regain his confidence.

If the American coal producer wishes to procure a market here, he must keep in mind the following: The quality of coal now being used in this part of France for steam purposes is a dry bituminous or, as it is often called, a semibituminous coal, not containing a high percentage of volatile matter. The American coal should most nearly resemble this Welsh coal in analysis and solidity, and should be sent in the proportion of large and small coal usually furnished by the Welsh dealer. We have coals which will give excellent satisfaction here, but the matter must be studied in a systematic manner, and rambling correspondence should be avoided. One cargo of poor coal will do a vast amount of injury. It is foolish to send French railway companies analyses of American bituminous coals containing less than 60 per cent carbon and more than 32 per cent volatile matter (as I know to have been the case), when we have inexhaustible quantities containing 70 to 80 per cent carbon and only from 18 to 22 per cent volatile matter. There have been several inquiries regarding our gas coals, but in sending prices gas coal should never be confounded with steam coal of the better quality. As I stated before, the most satisfactory steam coals for this market are those containing the greatest amount of carbon and the smallest amount of volatile matter.

The American exporter should be very careful in making consignments of cargoes of coal, and should know that the consignee on this side is honorable and responsible. I think it would be a good idea if samples of our best steam and gas coals were on exhibition at the United States consulates. At present, the scarcity of steamers of 2,000 to 3,000 tons interferes with the export coal trade from the United States. The passage of a ship-subsidy bill would go a long ways toward establishing a market on this side for American coal.

JOSEPH I. BRITTAIN,
Consul.

NANTES, *August 18, 1900.*

FRENCH COAL AND IRON PRODUCTION.

The Minister of Public Works, in the Journal Officiel of September 28 last, has published statistics of the production of the coal, iron, and steel industries of France for the first six months of 1900.

The production of anthracite and bituminous coal was 16,196,966 tons of 1,000 kilograms (2,204.6 pounds), as compared with 16,101,076 tons during the same period of 1899, an increase of 95,980 tons; that of lignite, 332,921 tons, compared with 282,712 tons in 1899, an increase of 50,209 tons—making a total production of mineral combustibles for the first six months of 1900 of 16,529,887 tons, as compared with 16,383,788 tons in 1899, a total increase of 146,099 tons for the first half of the year.

The annual consumption of coal in France is about 42,000,000 tons and the production 32,000,000 tons, leaving 10,000,000 tons to be imported to supply the deficiency. Of this latter, about 7,000,000 tons are brought from Great Britain and 3,000,000 tons from Belgium and Germany. If our American miners and shippers of coal can solve the question of cheap ocean transportation of coal to French ports, they will have fine prospects, even when the prices become normal, of sharing with Great Britain the 7,000,000 tons which that country is yearly sending to France. To do this, the freight rates to French ocean ports should be reduced to 10s. or 12s. ($2.43 or $2.67) per ton.

Production of pig iron for first six months of 1900 as compared with same period of 1899.

Description.	First six months of—		Increase.
	1900.	1899.	
	Tons.	*Tons.*	*Tons.*
Refined iron (fontes d'affinage)	1,079,108	1,033,901	45,207
Pig iron, first fusion	262,880	253,140	9,740
Total production	1,341,988	1,287,041	54,947

Production of iron rails, sheet iron, etc.

Description.	First six months of—		Increase.	Decrease.
	1900.	1899.		
	Tons.	*Tons.*	*Tons.*	*Tons.*
Rails	303	64	239	
Commercial iron	373,078	374,968		1,890
Sheet iron	37,422	44,631		7,209
Total production	410,803	419,663		8,860

Production of steel.

Description.	First six months of—		Increase.
	1900.	1899.	
Rails:	*Tons.*	*Tons.*	*Tons.*
Bessemer	143,946		
Open hearth	2,857		
Total	146,803	128,698	18,105
Commercial steel:			
Bessemer	161,436		
Open hearth	173,139		
Puddled or forged	3,535		
Tool steel	505		
Crucible steel	9,112		
From scrap steel	3,781		
Total	351,508	345,148	6,360
Sheet steel:			
Bessemer	36,252		
Open hearth	124,900		
Others	1,779		
Total	162,931	155,373	7,558
Total steel production	661,242	629,219	32,023

A. M. THACKARA,
Consul.

HAVRE, *October 3, 1900.*

UNITED STATES COAL IN MARSEILLES.

The following extracts are from the annual report of Consul Skinner, of Marseilles, to appear in Commercial Relations, 1900:

The most gratifying feature of the exchanges between this city and the United States is the fact that American coal appears for the first time as an article of import, and the experiment in this city having succeeded, has given occasion to similar importations, either actual or contemplated, in Algiers, Genoa, Naples, Venice, Pola, and Trieste. Marseilles has required about half a million tons of Cardiff coal annually heretofore, almost exclusively for navigation purposes. Importations during the first six months of 1900 were as follows: From England, 457,752 tons; Italy, 713 tons; Turkey, 5,201 tons; United States, 7,739 tons.

These figures do not explain that the relatively small amount imported from the United States consists of preliminary shipments on contracts for large quantities, for which tonnage has been hard to obtain, the balance of which is now coming forward rapidly. In the early part of the year, the experiments were principally made in various manufacturing institutions in the south of France—the region of the Lower Loire—and in Germany, with results reported

to me as satisfactory. A more important experiment was also made by the Paris, Lyons, and Mediterranean Railway Company, which contracted for 40,000 tons, only a small portion of which has been delivered. This company is so well satisfied that negotiations for other contracts have already been instituted. There is considerable talk about exportations to northern European ports, and even to London itself; but while it is no longer safe to be skeptical as to the success of any commercial enterprise, it is at least more probable that a permanent demand for American coal will be found mainly in the Mediterranean and far eastern ports, where the question of freight does not play so important a part.

With respect to the navigation-coal trade, one may say that the year 1900 has been a period of experiment, likely to be followed by importations of real importance from the United States during the year to come. An actual contract has been made by the Compagnie des Messageries Maritimes for 10,000 tons of New River coal, and trials of this same coal are to be made by the Peninsular and Oriental, Bibby, Orient, British India, Alfred Holt, and other less well-known companies. At Havre, the Compagnie des Chargeurs Réunis has received one cargo of Eureka and one of New River coal; and at Amsterdam, notwithstanding its proximity to England, the Stoomvaart Maatschappig Nederland has purchased a small lot. Las Palmas, Rio de Janeiro, Buenos Ayres, and the ports of the Antilles may be said to be buyers of American coal under such circumstances as to permit of no doubt of the permanency of the demand from those quarters.

So hopeful is the outlook in Marseilles that the Hudespeck Transatlantic Line, with headquarters at Richmond, Va., has been organized to provide regular sailings from Newport News to Marseilles, touching also at Naples and Genoa, as occasion may require. Sailings every three weeks have been contracted for, and coal is to be brought on when other cargo does not offer. Return cargoes of iron ore from Huelva, Spain, will be relied upon.

On August 1st, as I write this report, Cardiff navigation coal costs the dealers in Marseilles 31s. ($7.52) and Pocahontas 27s. 6d. ($6.68). This is on a basis of freight from Cardiff at 10s. 6d. ($2.55), and from Norfolk 17s. 6d. ($4.25). The dealers here claim that this apparent difference in favor of American coal is reduced to not over 3s. (73 cents), because of the increased cost of handling American coal. The Cardiff coal is so large in size that the best lumps may be used to construct retaining walls on the quays when the cargoes arrive. American coal is so small and friable that this can not be done, and to store it properly retaining walls must be built of large baskets filled with coal. In passing, I may say that on every hand I am assailed with comments on the comparative smallness of our

coal. Cardiff navigation has been so long and so favorably known in this market that another product is immediately considered in comparison with it, and in appearance, at least, the importations from the United States have been inferior. Under easier market conditions we would have a much more difficult time in selling our coal, because of this criticism. I know of a number of small consignments of coal—notably those brought over from New York in lots of 500 and 1,000 tons to complete cargo—which were found to be so unsatisfactory upon arrival that the consignees finally disposed of them by mixing them with Welsh coal, and it has been proposed to do this mixing on a very considerable scale here, unless the prejudice against small coal wears away, or American shippers find it possible to improve the character of their consignments. I am satisfied that much of this coal complained of leaves the United States in fairly good shape, but being naturally friable and shattered by powder, which is used in the United States much more extensively than in Wales, and being then shipped 5,000 miles and handled at least twice, and perhaps three times, before it is delivered into the ship's bunkers, it is reduced to mere slack when it reaches the foreign consumer.

The most of the coal being sold here to the navigation trade brings 25s. ($6.07) to the dealers, although it costs them considerably more. They are obliged to make this sacrifice, as the contract price for this year was fixed at 25s. last October. Being obliged to deliver, even at a loss, they are naturally displaying considerable energy in urging shipowners to accept American rather than Cardiff coal, but whether this enthusiasm will continue when next year's contract prices have been fixed will depend upon conditions. As I have explained in a special report,* the owners of the principal British lines make annual contracts in London for delivery throughout the year at the various ports of call reached by their steamers. At the present time, it is difficult to get Cardiff coal at all—first, because mine owners are doing their best to keep up prices; second, because there is a good demand for coal throughout Europe; and third, because British miners, benefiting by the sliding scale of wages, are less and less willing to work as the price of mining advances. Therefore, shipowners are inclined to be yielding and to accept American coal at the price they have agreed to pay for Cardiff, because they know that the coal contractors are losing money. I have before me a circular issued by Hull, Blythe & Co., of London, which says:

For some time past, owing to the sustained inordinate general demand for Welsh steam coal at a time when the production is being steadily diminished by the miners, we have found great difficulty in maintaining sufficient supplies of this

* See Special Consular Reports, Vol. XXI, Part I: Foreign Markets for American Coal.

description at some of our foreign stations. One of our largest colliery dealers in South Wales has for several months past been unable to give us the monthly quantities to which we are entitled under our own contract, and have now notified us that this state of things must be expected to continue for the remainder of this year.

Under these circumstances, we beg to inquire whether, in the event of our supplementing our stocks at certain stations with Pocahontas coal, you would be disposed to assist us by taking a proportion of this description under our contract with you, in lieu of Welsh coal. Pocahontas coal we have found from long experience to give steaming results closely approximating, if indeed not fully equal, to the best Cardiff, and the cost of laying down the same will be considerably more than that of the Cardiff coal contracted for by us to meet our requirements at the depots for the present year, and will therefore certainly involve a considerable loss to the suppliers.

These gentlemen annex to their circular a blank form to complete contracts with American coal, intended to be signed and returned by their customers.

While the present standard of prices is unlikely to be reduced for some time, the possibility of a reduction is one which should be confronted, in order that we may retain the hold that we have secured upon the export trade. Cardiff coal at 21s. ($5.11) at Cardiff is about double normal prices, and the difference between the cost of Welsh and American coal at delivery ports is some 4s. or 5s. (97 cents or $1.21). A break in that amount at Cardiff would be most difficult for the American exporters to meet, under present freight conditions. When we have secured large cargo boats, or perhaps learned to utilize as coal transports the fleet of ore carriers now frozen up during the winter on our Great Lakes, we will have done much to save the situation. It is but a step from this consideration to that of our merchant marine, upon the building up of which the development of our coal trade depends to a large extent, not alone as a means of providing tonnage at low rates, but to consume coal when laid down in foreign ports. I leave the subject with the passing remark that France requires 42,000,000 tons of coal annually, of which domestic mines can supply but 30,000,000 tons.

FRENCH SUPPLY AND PRICE OF COAL.

The price of coal in Rouen is now (October 16) 36 and 42 francs per 600 kilograms (about $11 and $13 per ton of 2,240 pounds), according to quality, and if present conditions continue it may reach $14 or $15 a ton in a few weeks. This is not a local rise caused by the dealers; the explanation is to be found in the interruption of the foreign supply, which exists all over France. One of the most important railroad lines will soon augment its almost exhausted

supply with trans-Atlantic coal. The opinion from authentic sources is that France will this year be short not less than 10,000,000 tons.

The chairman of the board of directors of the important Lens mines, M. Danel, is authority for the following significant figures: France annually consumes 42,000,000 tons of coal; she produces only 32,000,000 tons. In former years, the deficit has been made good by other countries, principally Great Britain, and to some extent by Germany and Belgium. All three of these countries, however, now require more than their own output. France has, it is true, enormous coal deposits; but these can not be worked, for the reason that there are not enough miners available. A country of only 38,000,000 or 39,000,000 people, with a standing army of 500,000 men, has not a great number of able-bodied men to spare when its many industries are considered. Mine owners are compelled to pay their workmen low wages in order to compete with foreign prices, and other lines of occupation with less danger and better prices are more attractive.

These conditions are not temporary, but from the very nature of the case must remain permanent; and if there ever was a time for American coal to compete with European it is now, and France offers an exceptional opportunity for American exporters. The only difficulty to be encountered is the excessive freight rate across the Atlantic. I am told that Mr. Hermann Barring, the well-known coal expert, who, this summer and fall, made an extended tour of Europe, stated upon his return to America that the excessive rates for freight across the Atlantic prohibit American coal from competing on the continent of Europe with British anthracite. This opinion, however, is expressed in face of the fact that coal is now being shipped from American ports to France.

Let me reiterate the opinion of all the consular corps: Circulars printed in English are a waste of time and money. Circulars come to this office giving the analysis of gas, coal, etc. What does a man who talks, writes, speaks, and thinks in French know about "volatile matters" or "fixed carbon", or "ash"? A ton of 2,240 pounds is as indefinite to a Frenchman as the word "some" is to an American. Quotations, to receive attention, must be put in French weights and money and in the French language.

THORNWELL HAYNES,
Consul.

ROUEN, *October 16, 1900.*

FRENCH STATE RAILWAY COAL CONTRACTS.

I have learned unofficially, but upon good authority, that the administration of the French State Railway (Chemins de Fer de l'État) will soon advertise for offers to supply 40,000 or 50,000 tons of coal.

The bids will be received early in November. Generally, the period between the official notice and the date when the offers are to be received is so short that American dealers, unless in France, would not have time to submit tenders. Those who wish to compete should consider the following:

(1) The coal is to be delivered at La Rochelle, probably in the basin known as La Pallice, in the company's cars.

(2) The price per ton must include cost, transport, and duty. The duty is 1.20 francs (23.16 cents) per ton of 1,000 kilograms.

(3) Payment is made within fifteen days after delivery.

(4) A certain proportion of lumps is required. This should receive special attention, as it is said in France that American coal is so friable that it is nearly all fine when delivered in Europe.

(5) I have no reason to believe that information concerning conditions of purchase will be officially given by the "directeur" to any party seeking to submit tenders, until the public notice is published. General information can be secured at this office.

(6) The prices paid by the Government for their last purchases were about as follows: Fine coal (menu), containing a large percentage of dust, 27.50 francs ($5.30) per ton; coal with a fair percentage of lumps (25 to 30 per cent), 32.80 francs ($6.37) per ton. These prices were "franco," that is, duty paid (by seller), delivered on cars alongside ship.

(7) It has heretofore been the custom of this road to pay a premium for fuel better than the contract called for and to diminish the price of coal which proved to be inferior to contract terms.

(8) At this port, a ship can discharge at least 400 tons per day. There is a perfect network of railway lines, so there need be no delay awaiting cars.

I submit this report believing that, in view of the great interest taken by American mine owners in the exportation of their product, someone may wish to capture this trade of a road that burns 220,000 tons of coal annually.

GEORGE H. JACKSON,

LA ROCHELLE, *September 16, 1900.* *Consul.*

AMERICAN COAL IN GREAT BRITAIN.

During the past few weeks, the continually increasing prices asked per ton for coals in this country have been a subject of daily comment in the newspapers, and have caused considerable agitation among householders and manufacturers. Contracts have had to be entered into by the different railway companies, gas companies, and large manufacturers for a supply of coal at prices in some cases nearly double, and in others more than double, those ruling a twelve-month ago. The coal owners openly admit that they intend forcing prices higher and higher, and claim that they are in a position enabling them to dictate terms. To the householder the matter is as serious as to the manufacturer. Present prices are not far short of those ruling last winter, which in turn were very much higher than in previous years; and it is stated that the prices during the coming winter will rise to 50s. and 55s. ($12.15 to $13.36) per ton. How great an increase this is will be apparent when it is remarked that the average winter prices in past years (excepting, of course, when strikes or other circumstances forced the price higher) have been from 25s. to 30s. ($6.08 to $7.30), the latter figure having been looked upon as exceptionally high.

In consequence of the present condition of affairs, various concerns have been publicly mentioned which claim to manufacture fuel from sewage, Thames mud, etc., and place peat on the market at prices exceedingly moderate. There is no doubt their commodities have a large sale.

An interesting development is announced this morning, the London Daily Express publishing an article relating to the arrival in the Thames of the steamship *Queenmoor* with a cargo of American gas coal, and commenting upon the possibility of the American coal miner being able to successfully compete with the British. As this article will be of interest to American coal miners, I inclose a copy.

WM. M. OSBORNE,
Consul-General.

LONDON, *August 16, 1900.*

AMERICAN COAL FOR LONDON—STRANGE DEVELOPMENT OF THE COAL CRISIS.

Last evening there steamed up the Thames the ship *Queenmoor*, bringing for the first time in the history of the world a cargo of American coal to London. This seems rather a sweeping statement to make, and it might be necessary to qualify it by admitting that American coal has of course come to the Thames as part of the necessary equipment of steamers crossing the Atlantic, but it is certainly believed that the *Queenmoor's* cargo is the first ever brought for sale to English buyers.

The *Queenmoor* has brought neither steam coal nor domestic coal, but gas coal—a description of the mineral which has unaccountably been lost sight of in all the discussions of the coal question.

There has been a struggle between British producers of gas coal on the one hand and the consumers of gas coal on the other, and the arrival of the *Queenmoor* with a consignment of 3,000 or 4,000 tons for a great London gas company is the highly significant sequel.

COMPARATIVE PRICES.

Up crops at this juncture the important question, Can American coal be brought to London to compete in price and quality with British coal?

Upon the first point it is sufficient to say that everything depends upon the price of coal in England.

The average price of coal in the port of London to-day is 23s. ($5.58) per ton. Inquiries show that with the freight added to the original cost in the American market, coal can not be delivered here from the other side at less than 27s. ($6.55) per ton.

These figures indicate that for the present Uncle Sam has no particular footing in any market on this side of the Atlantic. But it must be remembered that the British coal owner and merchant have coolly proposed to double the price of home-gotten coal, especially during the coming winter. Obviously, if British coal is to go up to 46s. ($11.75) or even 40s. ($9.72) per ton, America can undersell it, and this opens up immense possibilities which there is no necessity to discuss now.

There are, however, two points to be considered, one of which tells in favor of America and the other against. The first is that the coal resources of the United States are enormously greater than any which can possibly exist here. The American coal fields range from the well-known unlimited deposits of Pennsylvania as far southward as Virginia. Consequently, America can afford to export coal to an extent beyond calculation.

On the other hand, there is a second point—the question of transport. Practically all the coal must be sent across the ocean in British ships, and, moreover, those ships will very shortly be occupied in freightage, which has been the subject of long-standing contracts, for the transport of enormous quantities of wheat and cotton. The harvests of both these commodities are close at hand, and it is difficult to see how vessels can possibly be spared for the conveyance of coal.

NOT MUCH DANGER YET.

All things considered, it does not seem likely that there is any immediate danger of a coal invasion of England from across the sea to any considerable extent.

On the question of quality, America can undoubtedly hold her own. Her coal fields produce alike steam, house, and gas coal in unlimited quantities. Her coal contains a smaller percentage of carbon than the best British average, and gives a heat power of 15.5 pounds to the pound of coal, as compared with over 16 pounds in English coal. If pit-mouth rates and freights could therefore be suited to the exigencies of competition, America has little to fear on the score of quality.

The main point, of course, is how the incursion of American coal into the British market is likely to affect the latter in the future. American coal has been brought in as a weapon with which to decide the eternal dispute between the British producer and consumer, and who knows what influence that weapon may have upon the final issue?

The presence of the first American collier in English waters affords much food for reflection. Further facts which may come out shortly will throw a vivid light upon the question.

AMERICAN COAL IN LONDON.

Sell's Commercial Intelligence, in its issue of September 8, prints the following information in regard to the shipload of coal bought by the South Metropolitan Gas Company, of London. The Commercial Intelligence representative found at the time he made his visit the coal had not been tried; but while he was unable to get definite information, Mr. Livesey, the chairman of the company, gave him several facts of considerable interest, and this was supplemented by a communication dated September 3 in which the decided superiority of American coal over British coal is definitely announced. The article reads in part as follows:

It appears that Mr. Livesey had heard good reports of the American coal from several sources, and had for some time been intending to give it a trial, the present high price of English coal affording a favorable opportunity.

"Then this shipment was not in the nature of a challenge to British coal owners, Mr. Livesey?"

"Certainly not; nothing of the kind. I wanted to try American coal merely as an experiment."

"And if it is successful?" queried our man.

"We shall go on using it, of course," was the quick reply. "Whether it will be successful or not, I can not tell you yet; but I am assured that the yield of this coal will run up to 15,000 feet of gas per ton, against about 10,000 feet for ordinary English coal. If that proves to be the case, the American coal will be the cheapest for us at the present high price of English coal."

"The American coal is not actually cheaper, then?"

"No. It is put on board at less, but the cost per ton to us here is greater than for English coal. It is a question of quality rather than price. I am told by the engineer of the Port Elizabeth Gas Company, for instance, that the American coal is as much superior to Australian as Australian is to English. Indeed, he says, in effect, 'Let us have American coal; never mind the price—we must have it.'"

"A very remarkable testimonial, Mr. Livesey."

"Yes, it is. It only remains to be seen whether results will bear it out; one thing we know, of course, and that is, American coal makes the best coke."

"There has been some talk of building large vessels of 10,000 tons and upwards, solely for the coal trade from America, with a view to lessen freights, has there not?"

"I think," replied Mr. Livesey, "that they are only intended for the Mediterranean trade. In certain markets, such as in the Mediterranean and South America, American coal has competed successfully with British coal already, and I have no doubt if the Americans lay themselves out for the trade they will be able to do a good deal in the future; but I have not gone much into the freightage side of the question. We shall know the results of our first trial of the American coal about the beginning of next week, and I will ask our engineer to send the results to Commercial Intelligence as soon as he has them."

Thanking the chairman for his courtesy, our representative withdrew, and we-

publish below the engineer's report on the American coal, which reaches us as we go to press:

"DEAR SIR: In accordance with our chairman's instructions, I have to inform you that a first trial of American coal we have lately received has been completed. This shows that it is a coal very decidedly superior to what we are in the habit of using, notably in regard to the yield of gas per ton, the illuminating power, and the remarkably low quantity of sulphur. The coke is also of very good quality."

MARSHAL HALSTEAD,

BIRMINGHAM, *September 7, 1900.* *Consul.*

DEMAND FOR COAL AND BOTTLES IN IRELAND.

Mr. H. M. Charley, of the Antrim Iron Ore Company, Belfast, has asked me to procure for his firm, if possible, the agency of an American coal exporter. The Antrim Iron Ore Company ranks among the largest coal dealers in the Kingdom, and is a firm of excellent standing. A similar request was made by Messrs. John C. Reid & Co., of this city, dealers in steam and house coal.

If an opportunity of this character be grasped immediately, it means the opening up of a magnificent trade, which, in time, will prove a great boon to American coal exporters, through their ability to compete successfully in both price and quality with local dealers.

I have also been requested by Messrs. Wheeler & Co., of Belfast, manufacturers of aërated waters, to place them in communication with an American ginger-ale-bottle manufacturer, their intention being to import large quantities of these bottles, if prices are favorable. The firm would prefer to negotiate with a Baltimore, New York, Philadelphia, or Boston manufacturer, so that overland freight would be dispensed with.

MALCOLM T. BRICE,

BELFAST, *October 17, 1900.* *Vice-Consul.*

AMERICAN COAL IN THE NETHERLANDS.

I am glad to be able to report that American coal is beginning to find its way into the Netherlands. The first shipload of American steam coal was brought to Rotterdam per steamship *Dutch Prince* on February 27 last, for account of Messrs. Rings & Co., ship brokers; and the first shipment of anthracite coal, also 500 tons, arrived last week from Philadelphia per steamship *Glanton*, to the firm J. & C. Harrison, Limited. Besides these two shipments, 2,000 tons of steam coal have lately been imported from the United States, and I am informed that more shipments are to follow. If it had not been for the high ocean freight rates which have prevailed during

the Transvaal war—ranging from 15s. to 20s. ($3.64 to $4.86) per ton—I have no doubt that a great quantity of American coal could have been sold in the Netherlands during the past six months, and as soon as freight rates return to their normal average American coal will undoubtedly find a good market at this great seaport.

I pointed out in a former report* that there would be a splendid opening in Rotterdam for American coal-mine owners who had sufficient capital to establish their own coal yards and carry on their own business here entirely independent of local agents or dealers. I am glad to say that there are good prospects of such an enterprise being inaugurated. I had a call yesterday from the representative of a great American coal company, who is looking the ground over and who expressed himself well satisfied that good business was to be done here. The company in question has ample capital and contemplates building its own steamers for the transportation of coal, which, of course, will almost insure success from the start, as the company will be independent of any fluctuation in ocean freight rates. I hope in the near future to be able to report the Netherlands a good market for American coal.

S. LISTOE,
Consul.

ROTTERDAM, *August 6, 1900.*

PRUSSIAN FREIGHT RATES ON COAL.

The Department has received from Consul Hughes, of Coburg, two reports, dated September 12 and 14, in regard to the new freight rates on coal decided upon by the Prussian Ministry of State.† The principal effect of the new tariff, says Mr. Hughes, will be a modification of the fees in passing the coal through the custom-houses from 12 marks ($2.85) for 10,000 kilograms (22,046 pounds) to 7 marks ($1.66). This refers to all shipments from abroad which are imported into Prussia by rail, if they are not carried more than 350 kilometers (217 miles) from the frontier station or the landing harbor into the interior of the Kingdom. In case they go a longer distance, the charges for every kilometer in excess of 350 kilometers are reduced from 2.2 pfennigs (half a cent) to 1.4 pfennigs (one-third of a cent) per kilometer. Up to the present, two railroad coal tariffs have been in use in Germany:

(1) The cheap "Rohstofftarif" (tariff for raw materials) for coal deliveries made direct from the stations at the coal mines.

*See Special Consular Reports, Foreign Markets for American Coal.
†See ADVANCE SHEETS No. 850 (October 4, 1900).

(2) The special tariff No. III, with its more expensive rates, for coal delivered from other stations than those mentioned above, as, for instance, seaports or depots or storage yards of coal dealers.

The popular idea that the newly adopted measure of the Prussian Government meant a general reduction on the freight rates of coal has therefore proved an erroneous one, as the rates mentioned under 1 have already been in use since April 1, 1895, for all coal coming direct from the mines. Consequently, the innovation does not mean anything but an extension of the cheap tariff for raw materials to the stations mentioned above under 2. The logical consequence of this is that the reduction of freight rates is a help only to a small minority of coal consumers—that is, to those who are obliged to get their supply from depots or seaports, thus giving the first place to foreign coals.

The following table will show the reduction in freight rates that will now come into effect:

Distance.	Freight rates from stations coming under 1 for wagon-loads of 22,046 pounds.		Freight rates from stations coming under 2 for wagonloads of 22,046 pounds.		Reduction.	
	Marks.		*Marks.*		*Marks.*	
25 kilometers (15.5 miles)	13	$3.09	13	$3.09	.....	.....
50 kilometers (31 miles)	18	4.28	19	4.52	1	$0.24
100 kilometers (62 miles)	29	6.90	34	8.09	5	1.19
200 kilometers (124 miles)	51	12.14	56	13.33	5	1.19
300 kilometers (186.4 miles)	73	17.37	78	18.56	5	1.19
400 kilometers (248.5 miles)	91	21.66	100	23.80	9	2.14
500 kilometers (310.7 miles)	105	25.00	122	29.03	17	4.04
600 kilometers (372.8 miles)	119	28.32	144	34.27	25	5.95
700 kilometers (434.9 miles)	133	31.65	166	39.50	33	7.85

English or American coal is usually imported via Hamburg or Bremen. All freight rates for coal from Hamburg and Bremen are calculated according to special tariff No. III, and therefore in future, on being carried by rail within a distance of 350 kilometers (217 miles), will be allowed a rebate of 5 marks ($1.19) for 22,046 pounds. The distance from Hamburg to Hanover, for instance, is 183 kilometers (114 miles). The former freight amounted to 52 marks ($12.37); the present one is 47 marks ($11.18). From Bremen to Münster the distance is 234 kilometers (145 miles). The former freight was 63 marks ($15); present freight, 58 marks ($13.80). From Hamburg to Hildesheim the distance is 189 kilometers (117 miles). The former freight was 54 marks ($12.85); present freight, 49 marks ($11.66).

The districts farther than 350 kilometers (217 miles) from Hamburg or Bremen are situated mostly in the Westphalian coal district,

to which it is hardly possible that English and American coals can be imported by rail. It ought not to be overlooked that other places where English and American coal is employed (Berlin, etc.) are already more cheaply supplied by the water route from Hamburg and Stettin than they could be by rail, in spite of the new rate.

The most important point of the new tariff is therefore the reduction of charges for passing goods through the customs, these being applied not only for the delivery of coal from seaports into the interior, but also for storage places at the inland depots.

DEMAND FOR UNITED STATES COAL IN RUSSIA.

Consul Heenan writes from Odessa, August 30, 1900, that he recently received a letter from the mayor of that city, saying he had heard that American coal, owing to its high combustive properties, was being utilized by European manufacturers in the form of briquettes; also that it was selling in Genoa at 6s. to 8s. ($1.45 to $1.94) cheaper than English coal, and that three shiploads had been brought to Trieste, proving in no way inferior to the best Welsh, and selling at 5s. less. As the Odessa city council was then considering the question of obtaining the winter's supply of coal, the mayor asked for information as to the prices of American coal, the time it would require before it could reach Odessa, what quantities could be obtained, how long it would take to ship after the order was given, and what parties it was proper to address in the matter.

Consul Heenan answered that he regretted that he had no exact data as to the price of coal and probable time of delivery at Odessa, but, if the mayor would give him an estimate of the quantity and quality desired, he would at once report the matter to the Department, for communication to coal operators in the United States. He has not yet received an answer to this letter. Coal is now selling in Odessa, he adds, at 30 kopecks a pood (15.45 cents per 36 pounds). The soft variety is used. The city authorities have always purchased a large quantity of Cardiff coal in addition to Russian coal, but the price of Cardiff is so high that they will buy elsewhere if they can do so at a lower rate.

HIGH COAL PRICES IN AUSTRIA.

The high and constantly increasing price of coal in this country is causing an upward movement in the prices of various manufactured goods. The latest product to be affected is paper, makers of which have just held a conference resulting in a decision to increase prices. The amount of the increase is yet to be determined.

The high price of coal is arousing a general inquiry as to the cheapest sources of supply. Universal attention is directed toward the United States. It is noted that for the first time the United States leads all the nations of the earth in the production of coal. It is further noted that coal from the United States is being delivered at European ports cheaper than similar grades from England, which country has long been the source of supply for continental nations whose product was insufficient for local demands.

In a lengthy article on this subject, a leading Austrian newspaper says:

> The long-disputed question whether the United States could find a market in Europe—its former export went almost exclusively to Canada and other American countries—has ceased to be a question. As yet, the United States sends no coal to England,* but does send it to other European countries which heretofore have been supplied by England.
>
> The difference in price in favor of the United States is so important that a rapid growth of that country's export may be expected.

Present conditions certainly offer a golden opportunity for building up a great coal trade between the United States and Europe.

FRANK W. MAHIN,
Consul.

REICHENBERG, *July 28, 1900.*

COAL IN ITALY.

In reply to instructions received,† I submit the following report:

Italy, having no native coal fields, is necessarily dependent upon foreign countries for its supply, and has heretofore obtained practically the entire amount from England. The scarcity of coal during the past year has probably not been felt more severely in any country of Europe than in Italy, and in no part of Italy more seriously than in the province of Piedmont. This province and the adjoining one of

*See "American coal in Great Britain," *ante* p. 12.

†See Special Consular Reports, Foreign Markets for American Coal.

Lombardy are the principal manufacturing centers of the Kingdom, and hence require a greater quantity of coal than is needed in the agricultural districts. During the past twenty years, wonderful progress has been made throughout the country in many branches of manufacture, particularly in these two northern provinces, which not only supply all Italy with the products of their factories, but also export large quantities of goods to South America.

Geographically and by reason of the many lines of railway radiating therefrom, Turin is the distributing point for this district. This city is directly connected by railway with all the important manufacturing towns, the most distant of which can be reached from here in a little more than two hours. The chief ones are Novara, Vercelli, Ivrea, Santhia, Biella (sometimes called the Manchester of Italy), Varallo, Alessandria, Tortona, Asti, Casale, Mortara, Cuneo, Mondovi, Fassano, Saluzzo, Carignano, Pinerolo, Lanzo, Rivarolo, etc. In and near these towns are found large silk, cloth, and cotton factories; cotton, jute, and flour mills; tanneries, foundries, mechanical and electrical works; while in and adjacent to Turin are two royal arsenals and small-arms factories, and, in addition, numerous mills and factories of various kinds. In the city of Turin there are two gas works, each consuming 50,000 tons of coal annually.

As the mills and factories have increased in number and size, the quantity of coal consumed in this district has proportionally advanced. An examination of the following table will show a constant increase in the amount of coal imported at Genoa and Savona during the past fifteen years. During this period, the amount entered at these two ports (consumed principally in these two northern districts) has risen from 1,250,000 tons to upwards of 3,000,000 tons per annum. The coal destined for Turin and other parts of the province of Piedmont is all entered at one or the other of the above ports. Railway rates make Savona the most desirable port of entry for coal intended for most parts of this district.

No serious or systematic effort has ever been made to introduce American coal into this district or even into this country. I have been informed that the entire amount of American coal imported into Italy during the past year reached only the insignificant figure of 40,000 tons. The gas companies of this city, after having experimented with 1,000 tons of American coal, have, I am informed, given an order for another small cargo.

The manufacturers in this country have for many years used English coal exclusively; they are conversant with its properties and will be slow to change to a new variety, unless it is manifestly to their interest to do so. In my opinion, it would be most expedient for any American company intending to send coal to this district

to have in this city an energetic and well-informed agent who, by reason of his knowledge of the country and the requirements of business, could handle shipments with celerity and discretion. If American exporters should make consignments to such an agent in Turin, and if he were enabled to offer the coal at a figure which would be under the current rates for English coal, I believe in a very short time a most important business could be established.

The following tables show the amount of coal entered at the ports of Genoa and Savona during the past fifteen years, the average freight paid from Cardiff and Newcastle to these points, the prices paid for different varieties of coal during the year 1899, and the prices ruling on the 1st day of August, 1900.

I am indebted for these statistics to the courtesy of Mr. Hugo Pizzotti, who has been established in business for a quarter of a century at Turin and who is interested in the introduction of American coal into this district and, I doubt not, will be pleased at any time to give any desired information concerning his business.

Amount of coal imported into port of Genoa.

Year.	Shipments from—						Total.
	Cardiff.	Newcastle.	Hartlepool and Middlesbro.	Scotland and Liverpool.	Hull and Grimsby.	France.	
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
1885	.....	.....	.....	.....	.....	.....	1,048,156
1886	.....	.....	.....	.....	.....	.....	1,074,156
1887	632,883	406,561	29,374	109,667	8,826	8,857	1,196,168
1888	646,046	455,218	48,660	113,959	6,386	9,155	1,279,424
1889	668,890	476,443	32,083	114,497	.....	15,658	1,307,571
1890	749,001	574,714	8,953	138,625	231	22,107	1,493,633
1891	852,953	460,533	500	123,388	4,252	13,883	1,455,509
1892	930,792	444,289	.....	126,881	16,825	12,879	1,531,666
1893	962,607	526,667	.....	97,994	3,970	6,751	1,597,989
1894	1,131,516	596,788	.....	96,143	26,130	4,719	1,855,296
1895	1,092,711	566,090	.....	108,926	19,634	4,709	1,792,070
1896	1,172,931	533,249	2,245	132,047	11,516	1,040	1,853,028
1897	1,272,154	620,717	.....	176,833	10,953	2,156	2,082,813
1898	933,354	715,808	24,101	372,947	29,941	583	2,111,734
1899	1,394,540	621,160	21,976	275,316	27,061	337	2,355,390

In the year 1898 there were entered at the port of Genoa 35,000 tons of coal from Belgium and Germany, and in the year 1899 15,000 tons from America.

Amount of coal imported into port of Savona.

Year.	Shipments from—					Total.
	Cardiff.	Newcastle.	Hartlepool and Middlesbro.	Scotland and Liverpool.	Hull and Grimsby.	
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
1885	.....	.....	.....	.....	.....	355,435
1886	.....	.....	.....	.....	.....	395,396
1887	153,223	257,988	5,114	29,962	6,712	452,999
1888	131,157	205,666	14,066	53,960	6,162	511,011
1889	108,346	273,409	24,504	71,368	10,134	487,761
1890	85,975	267,466	7,215	66,458	8,576	435,690
1891	.....	.....	.....	.....	.....	369,829
1892	99,648	220,538	.....	52,656	1,420	374,262
1893	117,388	233,929	.....	36,358	.....	387,675
1894	159,287	262,151	.....	42,802	5,688	469,928
1895	138,960	219,066	.....	46,232	.....	404,258
1896	140,552	261,830	460	41,865	.....	444,707
1897	151,308	273,246	985	47,100	.....	472,639
1898	166,888	256,848	17,314	65,843	.....	506,893
1899	283,337	305,602	10,244	76,958	7,302	683,443

Average freight paid for coal steamers.

Year.	Cardiff to Genoa.		Newcastle to Genoa.		Cardiff to Savona.		Newcastle to Savona.	
	s. *d.*		*s.* *d.*		*s.* *d.*		*s.* *d.*	
1886	9 7¼	$2.335	8 8⅜	$2.117	9 10½	$2.65	9 0	$2.19
1887	9 9⅜	2.358	8 8	2.11	10 1	2.45	8 10¾	2.165
1888	10 1½	2.455	8 10	2.15	10 4½	2.525	9 3	2.25
1889	11 1¾	2.715	9 4½	2.28	11 4½	2.77	9 8½	2.35
1890	8 7	2.09	7 6	1.825	8 8¾	2.14	7 10	1.91
1891	7 9	1.885	6 8	1.62	7 11½	1.94	6 11	1.68
1892	7 10	1.905	6 10½	1.665	8 0	1.95	7 0¾	1.715
1893	7 1½	1.73	6 1½	1.49	7 3½	1.77	6 3½	1.53
1894	6 2½	1.625	5 1	1.24	6 4½	1.55	5 4	1.30
1895	6 3½	1.525	5 0½	1.23	6 4¾	1.55	5 3½	1.29
1896	6 8½	1.63	6 1	1.48	6 9½	1.65	6 4	1.54
1897	7 7½	1.855	7 4	1.785	7 8½	1.875	7 4½	1.815
1898	8 11	2.17	8 6½	2.08	8 11½	2.18	8 9	2.13
1899	8 10½	2.16	8 7½	2.10	8 10	2.15	8 7½	2.10

Prices paid for different varieties of coal c. i. f. Genoa and Savona.

Description.	Price.											
	1899.									August 1, 1900.		
	s.	*d.*		*s.*	*d.*					*s.*	*d.*	
Scotch	18	1½	to	19	0		$4.41	to	$4.62	26	9	$6.506
Newcastle	18	0	to	21	3		4.38	to	5.166	28	0	6.816
Gas	15	9	to	21	9		3.83	to	5.226	27	6	6.696
Cardiff	22	0	to	24	3		5.356	to	5.896	37	0	9.006
Anthracite	19	7	to	25	0		4.765	to	6.086	32	0	7.786

PERCY MCELRATH,

TURIN, *August 18, 1900.* *Consul.*

COAL IN BARCELONA: STEAMSHIP LINE TO NEW YORK.

The following, dated Barcelona, October 18, 1900, has been received from Consul-General Lay:

Barcelona, the principal port in Spain, consuming nearly 700,000 tons of coal yearly (550,000 of which come from England), offers a good market for American coal if the problem of cheap transportation from the United States can be solved. Local quotations (per ton) of British and Spanish coals are at present:

Description.	Price, c. i. f.	
	Shillings.	
Best Cardiff steam	40	$9.73
Second-class Cardiff steam	38	9.24
Newcastle steam	31	7.54
Newcastle gas	31	7.54
Scotch steam coals	29	7.05
Aviles and Gijon	29	7.05

The freights on coal cargoes from Cardiff, Newcastle, and Scotland vary every month, but are at present:

From—	Per ton.	
	s. *d.*	
Cardiff	11 6	$2.80
Newcastle	12 6	3.04
Glasgow	12 6	3.04
Aviles and Gijon	10 6	2.55

FACILITIES OF PORT OF BARCELONA.

Steamers with coal cargoes discharge in the outer harbor, moored stern on to the quay. The depth of water at this usual discharging berth is about 23 feet, but steamers of 26 or 27 feet could also be accommodated if necessary. Discharging can be done at the rate of 500 to 700 tons per day, but, as the usual British coal charter party stipulates for only 300 to 400 tons per day, unless the ship is willing to pay dispatch money, this rate is not usually exceeded.

A private concern is now constructing an aërial electrical apparatus which, it is claimed, will unload at the rate of 800 or 900 tons daily.

The Spanish Government has recently given concessions to local companies to maintain two floating coal hulks for bunkering ships, and thus avoid duties.

The usual terms of credit allowed by British merchants are open credit for thirty days, less 2½ per cent discount; but some firms allow three months' credit to some of their customers, accepting drafts at ninety days in exchange for documents. The standing of most of the firms engaged in the coal trade is good, and even during the present crisis no failure has been recorded.

OBSTACLES TO BE OVERCOME IN INTRODUCING AMERICAN COALS.

(1) As the freight from British ports varies according to supply and demand, so does it also from the United States, but in a much greater degree, following the demand for tonnage for cotton and grain cargoes to northern Europe and the Mediterranean. One cargo of American gas coal imported during the month of May paid 18s. ($4.38) a ton freight. At the present writing, freight rates are quoted at 22s. ($5.36) per ton.

(2) The steamers offering to load for an Atlantic voyage are generally of 3,000 to 5,000 tons dead weight, and it is difficult to place so large a cargo with one merchant or even with several. The steamers usually loading in British ports for this trade average from 2,000 to 5,000 tons.

Steamers from Wales and Scotland generally get a cargo in the shape of ore and fruit sufficiently large to pay expenses, by calling at several Spanish ports for the return trip; colliers from America should get a small amount of wine, ore, and dried fruit, but the table under the head of transportation facilities will show to some extent how little colliers could depend on return cargoes from Spain, except those of ore.

(3) As American steam coal has never been imported here, it is very difficult to estimate its exact value as compared with other descriptions, such as Welsh and Scotch coal, and, although an analysis can always be given, merchants are not inclined to purchase without some more practical proof of quality.

PORT CHARGES.

Although American coal has benefited very considerably by a royal decree which came into force in Spain on the 20th of March last, there is still a slight extra charge as compared with European coal. Previous to the above date, the total charges on a ship arriving at this port with a cargo of American coal were 9 pesetas (about $1.35 at present exchange) per ton, whereas under the new tariff the

rate on non-European cargoes of coal is reduced to 4 pesetas (about 60 cents), made up as follows:

	Pesetas. Cts.
Port-works tax (local charge)	2=30
Transport tax (general for Spain)	2=30
Total	4=60

The charges on a steamer with European coal are as follows:

	Pesetas. Cts.
Port-works tax (local)	2.00=30
Transport tax (general)	.50= 7.5
Total	2.50=37.5

Which makes a difference in favor of European coal of 1.50 pesetas (about 22 cents) per ton. These charges are in the nature of "port and light dues," and are leviable on the ship, and have nothing to do with the custom-house duty, which is payable by the receiver in all cases.

In my opinion, the best way to introduce our coal into this market is to send a small quantity at first as a sample, dividing a cargo between Italian and Spanish ports; and if the coal and prices suit the local dealers, to make profitable arrangements for colliers. The present offers from America of $2.50 per ton f. o. b. United States ports, cash against shipping documents, on coal that is unknown here, and freights from 20s. to 22s. ($4.86 to $5.36) a ton, are poor inducements to the Barcelona coal merchant.

TRANSPORTATION FACILITIES.

The Spanish Compañia Trasatlantica, with a large fleet of steamers plying between Spain, Cuba, South America, and Mexico, about three months ago established a direct line between Barcelona and New York, leaving Barcelona on the 26th of each month and touching at other principal Spanish ports both ways.

From the following table, which gives the tonnage and freight rates to and from Spain, it will be seen that the freights carried by this line, especially from Spain, have so far been small; but cheaper and more direct transportation should increase our export trade, and it is to be hoped that our exporters will patronize this line of steamers, which does something to overcome the present discriminating Spanish tariff on our goods.

As will be noticed, the rates on this line are very high, but lower than on lines via Marseilles and Liverpool. For instance, 30s. ($7.29) per ton is asked on wire and wire rods from New York to Barcelona, the only alternative line being the Cyprien Fabre Line

of French steamers, running to Marseilles, with a through rate to Barcelona, including transshipment at Marseilles, of 32s. 6d. ($7.90) per ton. This is nearly three times as much as the freight to ports in Great Britain.

Traffic between New York and Spain by the Spanish Compañia Trasatlantica's steamers during the months of June, July, and August, 1900.

IMPORTS.

Merchandise.	Quantity.	Rate of freight per ton.	
Barcelona.	*Kilograms.**	*Shillings.*	
Petroleum	164,923	22 to 25	$5.35 to $6.08
Raw cotton	754,759	.....	(†)
Bicycles	241	.....	7.00 to 8.00
Empty bottles	319	.....	7.00 to 8.00
Coffee	4,241	.....	7.00 to 8.00
Drugs	916	.....	7.00 to 8.00
Beans	15,400	20 to 25	4.86 to 6.08
Oilcloth	1,152	30 to 40	7.29 to 9.73
Files	1,943	30 to 40	7.29 to 9.73
Lard	19,429	30 to 40	7.29 to 9.73
Machinery	1,969	30 to 40	7.29 to 9.73
Furniture	1,474	30 to 40	7.29 to 9.73
Perfumery	3,037	30 to 40	7.29 to 9.73
Skins and leather	6,378	30 to 40	7.29 to 9.73
Sausage covers	79,084	30 to 40	7.29 to 9.73
Wine in boxes	3,393	30 to 40	7.29 to 9.73
Spirit, extracted from briar	3,504	50 to 55	12.16 to 13.38
Total	1,062,162	.....	.....
Cadiz.			
Sugar	6,818	.....	.12½ to .15
Pickles	8,194	.....	6.00 to 7.00
Staves	50,400	(‡)	(‡)
Phonograph accessories	1,953	30 to 35	7.30 to 8.51
Flour	213,100	.....	4.00 to 5.00
Machinery	328	30 to 40	7.30 to 9.73
Furniture	393	30 to 40	7.30 to 9.73
Total	281,186	.....	.....
Santander.			
Cartridges	1,178	(§)	(§)
Machinery	949	30 to 40	7.30 to 9.73
Total	2,127	.....	.....
Valencia.			
Sausage covers	27,499	35 to 45	8.51 to 10.94
Malaga.			
Lead seals	8,829	35 to 40	8.51 to 9.73
Carthagena.			
Hams	3,910	37 to 40	9.00 to 9.73
Sausage covers	6,880	35 to 45	8.51 to 10.94
Total	10,790	.....	.....
Gijon.			
Skins and leather	1,041	40 to 45	9.73 to 10.94

* 1 kilogram = 2.2046 pounds.

† 32 to 40 cents per 100 pounds.

‡ £6 to £7 ($29.20 to $34.06) per 1,000.

§ 2 to 3 cents per pound.

Traffic between New York and Spain, etc.—Continued.

EXPORTS.

Merchandise.	Quantity.	Rate of freight per ton.	
Barcelona.	*Kilograms.**	*Pesetas.*	
Paper and printed matter	4,685	35 to 45	$5.25 to $6.75
Oil, olives, and capers	6,077	30 to 35	4.50 to 5.25
Wine	4,280	(†)	(†)
		Francs.	
Cork stoppers	17,555	75 to 80	14.48 to 15.44
Total	32,597		
Cadiz		*Shillings.*	
Wine	20,790	30 to 35	7.30 to 8.51
Malaga.			
Palm hats	111,400	20 to 25	4.87 to 6.08
Wine	11,410	(‡)	(‡)
Total	122,810		

* 1 kilogram=2.2046 pounds.
† 17 to 20 pesetas ($2.55 to $3) per pipe.
‡ 40s. to 45s. ($9.73 to $10.94) for 2 pipes.

GIBRALTAR COAL TRADE.

The sales of coal in this market have been increasing since the beginning of the past month.

The present combination price for coal at this port is 37s. ($9.006) per ton for all descriptions with the exception of Welsh, the stock of which is very much reduced.

North County, Lancashire, and Scotch coal are the kinds that have been dealt in of late for supplying the numerous steamers calling at this port, owing to the strikes in England; but I am able to report the recent arrival of the British steamer *Collingham* with a cargo consisting of 3,100 tons of New River coal, loaded at Newport News on private account, for sale at this port.

It is in the hands of the Union Coal Company, established here to supply steamers coming to its address, and was purchased through London agents.

The master of the *Collingham* states that the coal is equal in steaming properties to the Welsh, with the same consumption; but it runs very small and is devoid of large lumps.

Being the first cargo of American coal discharged at this port for sale, it will be interesting to learn whether it will result in encouraging further importations from the United States.

The private sales of coal at Gibraltar, during the month of August, have been as follows:

	Tons.
171 steamers	21,770
In 1899, 122 steamers	17,756

HORATIO J. SPRAGUE,

GIBRALTAR, *September 10, 1900.* *Consul.*

AMERICAN COAL IN ALGIERS.

Referring to my report of April 6,* in which I stated that no coal from the United States had ever been imported here, I now have to state that a cargo of 4,000 tons of "Kanawha" gas coal has been received.

I have allowed sufficient time to elapse for a fair test of its quality, and am now informed by the manager of the company that it seems to be as good as the best English coal. He is unable to state the percentage of gas obtained, as he has no computer. The coke is as plentiful and as good as with the best English coal. He thinks that American coal contains more slate. That the experiment has proved satisfactory is attested by the fact that another cargo has been ordered and is probably on its way here.

With reference to coal other than that used for gas, one local dealer informs me that he has already negotiated for 40,000 tons, and another says that he expects to send for a cargo at an early date.

As I stated in my former report, the annual importation of coal to Algiers has been about 400,000 tons, of which between 250,000 and 300,000 are used for filling the bunkers of steamships. About 50,000 tons supply the rest of Algeria. This will undoubtedly increase with the extension of trade beyond Port Said, as Algiers is gradually becoming regarded as the most convenient harbor for filling bunkers, for continuing trips to English, German, and Dutch ports, and especially to the United States. For example, steamship agents tell me that twenty vessels from Java alone, with sugar for Delaware Breakwater, will coal here next month.

It would certainly appear as if our merchants should make some especial effort, and perhaps some concessions at first, to capture this market.

Local dealers are of the opinion that our coal companies follow Cardiff prices too closely.

DANIEL S. KIDDER,

ALGIERS, *August 25, 1900.* *Consul.*

*See Special Consular Reports, Foreign Markets for American Coal.

COAL IN THE CANARY ISLANDS.

The clause in the coal contracts appertaining to strikes was yesterday declared in force at Teneriffe, on account of the troubles in Cardiff. Messrs. Hamilton & Co., the largest coal importers at Teneriffe, inform me that as they were compelled, according to the contracts made with the different steamship lines, to deliver admiralty Welsh coal, it has been impossible to handle any other kind; but now, as the strike clause has taken effect, they will undoubtedly begin to import American coal. I am also told that Messrs. Miller & Co., one of the largest dealers at Las Palmas, Grand Canary, have ordered 10,000 tons of American coal. They are afraid to order more, as, if the strike is declared off, the contracts will again be enforced. There are at present only about 3,000 tons on hand, and this ought not to last over one week.

I would advise our merchants to bid immediately and also try to make contracts for the coming year.

These islands are at present important in the coaling business, and are growing more and more so every day. I will be glad to furnish any information our merchants may desire.

SOLOMON BERLINER,

TENERIFFE, *August 25, 1900.* *Consul.*

AMERICAN COAL IN SIERRA LEONE.

Sierra Leone continues to grow in importance as a coaling station. Its geographical position with regard to British colonial trade interests in West, Southwest, and South Africa renders it indispensable as such.

The Sierra Leone Coaling Company, with its home office in Liverpool, is the proprietor of the business here and contracts with the British Admiralty. There are no mines in this consular district. The supply of coal for this station is imported almost exclusively from Great Britian, coming principally from Cardiff, Wales. Occasionally, a cargo is imported from Germany. In 1898, there were imported into this colony 17,601 tons of coal, valued at £28,678 ($139,547); Germany contributed 1,000 tons of this, the remainder, as I have said, coming from England. There is no duty on coal or patent fuel imported into Sierra Leone.

Coal intended for this market should be selected with a view to steamship purposes and be of the best grade. American coal has never been used here, and those interested in the trade are, as might

be expected, partial to Cardiff coal. Should an introductory shipment of American coal be made, and prove satisfactory, I have no doubt this market could be held permanently.

In conversation with the agent general of the coaling company of the station some time since, I pointed out the merits of American steaming coal and the enormous output of the mines, which have placed American exporters in position to offer great inducements to the foreign trade, etc. In a letter to me some weeks later, he stated he desired that I should obtain of American exporters or from the proprietors of the collieries full particulars of their coal—the quality, at what price they would deliver it here c. i. f., etc. He would then place the matter before the home office. I would advise exporters or those interested to correspond directly with the Sierra Leone Coaling Company here, giving their most liberal terms and quotations embracing prices at the mines, on board ship, and also delivered in Sierra Leone. I have not been able to get full information with regard to the original cost and prices current of Cardiff coal.

I would again emphasize the importance of quality being given major consideration in the shipment of coal here. This being the first opening for American coal at this station, it is of vital importance that the matter engage the immediate attention of those concerned.

JOHN T. WILLIAMS,
Consul.

SIERRA LEONE, *July 21, 1900.*

COAL IN MARTINIQUE.

Coal is used on steamboats and on sugar estates, but some of the plantations are provided with improved furnaces which permit the use of megass in addition to coal. Westmoreland coal is the quality preferred here. This fuel is now nearly all imported from the United States, where it is purchased at cheaper rates than elsewhere. The following is a table showing the comparative quantities received at St. Pierre from the three different sources of supply:

From—	Last six months in 1898.	Year 1899.	January 1 to August 31, 1900.
	Tons.	*Tons.*	*Tons.*
France	110	1,671	30
In brick form	.....	50	245
United Kingdom	1,613	Nil.	Nil.
United States	2,131	6,869	6,372
Total	3,854	8,590	6,647

The English coal does not give as satisfactory results in combustion as the American. This has been noticed in the sugar factories

and on board the small steamers plying between St. Pierre and Fort de France.

The advance in price, owing to continued strikes in the United Kingdom, has, to a great extent, tended to divert the trade to the United States. Duty on coal from foreign ports is as follows:

Description.		Duty.	
		Francs.	*Cents.*
Customs or differential duty		None.	
Municipal or "octroi" duty	per 1,000 kilograms (2,200 pounds)	2.50	47.62
Statistic or package dues	do	.15	2.86
Wharfage dues	do	.50	9.52
Total		3.15	60

The bill of lading is taken as the basis as regards the number of tons dutiable.

A. TESTART,
Vice-Consul.

MARTINIQUE, *September 8, 1900.*

COAL IN COSTA RICA.

Costa Rica imports very little coal. The imports for 1894, 1895, and 1896 (the latest published statistics) were:

Year.	Great Britain.	Germany.	United States.
	*Tons.**	*Tons.**	*Tons.**
1894	8,347	102	1,129
1895	4,866	.....	355
1896	6,026	13	152

*Of 2,204.6 pounds.

Coal is not used as fuel and is not sold in the open market, so no prices can be quoted. It is imported via Limon on the Atlantic coast by the Costa Rica Railway for the company's own use, by the United Fruit Company for use on its banana railways, and by one or two firms or individuals for various purposes. The railway company brings a compressed coal briquette in chartered ships from Cardiff. It is claimed that better results are obtained from this than from common coal, as there is less waste, which is an important item in this climate, where the waste is considerable. There are no coal sheds in this country so far as I know. The fruit company brings coal from New Orleans in its chartered steamers. It is a bituminous coal from the vicinity of Pittsburg. The company's importation for the present year will probably not exceed 2,000 tons.

A small quantity of coal is imported via Punta Arenas, on the Pacific coast. It comes in sailing vessels and is almost, if not entirely, all imported from Germany. A few months ago, a cargo of some 500 or 600 tons was imported by the Costa Rica Government for use in its steamer on the Pacific coast. Unless some unforeseen emergency should arise, this supply will last for a very long time.

Coal pays a duty of 1 cent (less than half a cent gold) per 10 kilograms. The landing charges at Limon are $2.50 ($1.13 gold) per 1,000 kilograms (2,204.6 pounds). I believe the Costa Rica Railway offers a special rate for this service of $1.85 (84 cents gold) per 1,000 kilograms (2,204.6 pounds). If any coal were brought by rail to San José, the freight charges would be very high.

On the whole, I can not see any prospect of substantial increase in the consumption of coal in Costa Rica until new industries spring up and new enterprises are undertaken.

JOHN C. CALDWELL,
Consul.

SAN JOSÉ, *September 10, 1900.*

COAL IN THE YUKON.

The demand for coal in this Territory is at present very limited. On account of the high rates of freight and cost of handling, it is not likely that any quantity of coal will be imported. The demand for American coal is small, a few hundred tons for blacksmith work only being required. Coal mines have been developed, and although not as good as American coal, the product may answer for blacksmith work. There is a well-developed coal mine on Rock Creek, a tributary of the Klondike River, about 20 miles north of Dawson; the coal is a lignite of superior quality. This land belongs to the Alaska Exploration Company, of San Francisco. Another mine developed last year, from which some 2,000 tons have been taken, produces the same quality. It is situated on Cliff Creek, a small stream emptying into the Yukon about 50 miles below Dawson, in the Yukon Territory. The owner of the latter mine is the North American Transportation and Trading Company; offices, Chicago and Seattle. It is intended to build a dock with sufficient storage capacity to enable the managers to supply Dawson and vicinity.

The decrease of the available timber will result in a corresponding increase in consumption of coal. At present, wood is principally used by steamboats, machine shops, sawmills, for boilers in the mines, hotels, restaurants, etc. The present price for coal c. i. f. Dawson is $25 per ton.

J. C. McCOOK,
Consul.

DAWSON CITY, *July 31, 1900.*

COAL TRADE OF FORMOSA.

The local consumption of coal, owing to the absence of large factories, is small. The railway, the government factories for camphor and opium, and the coasting steamers are the only large customers. This demand is supplied entirely by the local mines, there being no import of coal.

There is exported from Formosa some 18,000 to 20,000 tons of coal a year, valued at 75,000 yen ($37,500). Much of it is in the form of dust, and it is all of a quality inferior to foreign steamer coals. The annual amount consumed locally is estimated as follows:

	Tons.
Steamer	6,500
Factories	6,000
Miscellaneous	5,500
Total	18,000

There is a great abundance of coal in the island. From Kimpauli (Kimpori), in the extreme north, to the mountain range to the rear of Pangliau (Borio), in the far south, coal abounds. East and west, it probably exists in some places practically from coast to coast, and even in the flat, barren isles of the Pescadores, this useful article is found. This wide distribution of coal measures means very little, however, when it comes to a profitable working of the same; for nature, in a seeming attempt to make a limited quantity cover the whole island, has provided innumerable small seams abounding with faults and fissures, ranging, so far as at present known, only from 1 to 3 feet in thickness.* Mining on a large scale is thus impracticable, and even at the comparatively high prices at present obtainable, Formosa mines find it difficult to carry on their work at a profit.

The coal mines now in operation are located entirely in the north, and are in the hands of either Japanese or natives, no foreigners being interested in the business. The total output from both Japanese and Chinese mines reaches about 3,000 tons per month. It is not through lack of funds or energy on the part of the mine owners that the production is so small, as is shown by the

*Note by Consul.—There is one small district in which two or three seams, ranging from 3 to 5 feet, have been found. The Chinese Government erected, some twenty years ago, at great expense, a modern mining plant to work these deposits. The expense of the undertaking was out of proportion to the value of the coal obtained, and after some years the supplies were exhausted and the mine closed.

promptitude exhibited by the Japanese in erecting large mills in the gold district, but it is simply due to the fact that unprejudiced experts who have made careful investigations are of the opinion that the Formosa deposits, as at present known, are distributed in beds too thin and yielding a coal of too low value to make large works profitable.

JAMES W. DAVIDSON,
Consul.

TAMSUI, *July 28, 1900.*

COAL IN HONGKONG.

I can not find that American coal has ever been used in this colony. If it could be sold in competition with Cardiff, Australian, and Japanese coal, the coal merchants here would without doubt have introduced it years ago. In 1899, there were 687,557 tons of coal of all grades imported into this colony. This, of course, does not include bunker coal. As there is no custom-house here, I am unable to state definitely the proportion of the different kinds. On August 7, one of the leading firms here reported in its weekly market letter that Cardiff was selling at from $30 to $35 Mexican ($14.70 to $17.15) a ton ex godown; Australian, at $14 to $14.50 Mexican ($6.86 to $7.10) per ton; and Japanese lump, from $8 to $11 Mexican ($3.72 to $5.89), according to quality. Owing to the increased demand for coal during the Chinese war, Cardiff has reached $45 Mexican ($22.05) during the month. There are no coal mines in this district or in southern China, although 300 miles up the West River there are extensive fields that at some future time will furnish unlimited quantities of coal of the Japanese grade. In Tonkin there are coal mines which supply a coal that is now being used by the French mail steamers.

American merchants might correspond with the following firms as to the introduction of their coal: Shewan, Tomes & Co.; Blackhead & Co.; Jardine, Matheson & Co.; and Bradley & Co.

Cardiff coal is used only by men-of-war. The amount consumed by steamers of all other classes is supplied from Japan, which will without doubt be able to furnish enough for many years to come.

ROUNSEVELLE WILDMAN,
Consul-General.

HONGKONG, *August 24, 1900.*

RISE IN COAL PRICES IN AUSTRALIA.

Under date of October 1, 1900, Consul-General Bray, of Melbourne, sends an article from the Melbourne Argus of September 29, 1900, on the rise in the price of coal and the effect upon the manufacturing industries of Victoria, as follows:

In accordance with an anticipation expressed at the meeting of the colliery proprietors of Newcastle on the 20th instant, it has been decided to raise the price of coal from January next to 11s. ($2.67) per ton, instead of 10s. ($2.43) per ton, as previously agreed upon. The advance will be the substantial one of 3s. (72 cents) per ton, or 37½ per cent on the present price of 8s. ($1.94) per ton. Under the agreement, the miners will get 4d. (8 cents) per ton of the extra 1s. (24 cents) now agreed upon. The action taken by the colliery proprietors must, of necessity, have a far-reaching and disastrous effect upon all those industries in Victoria which depend upon coal for the output of their various manufactured articles. At present, the greater part of the coal for factory purposes imported from Newcastle to Melbourne costs about £1 ($4.86) per ton, and the increase in the price at the pit's mouth in January next will bring the price up to £1 3s. ($5.58) per ton. In view of the steady increase in the consumption of coal in Victoria and the additional factories and workshops which are everywhere springing into existence under the stimulus of the approaching federation of Australia, the loss to Victoria manufacturers will be very severe, and, in the opinion of experienced commercial men, many of the smaller capitalists will be obliged to close down their works altogether. During the six months ended June 30, 1900, the quantity of coal imported into Victoria was 370,465 tons, while for the corresponding period of last year the quantity was 270,881 tons. The total export of coal for the half year from New South Wales was 1,383,000 tons, of which 884,000 went to intercolonial ports, while 498,000 went into foreign markets. In consequence of the war and of the greatly enhanced price of coal in England, the foreign demand for Newcastle coal is increasing, and coal owners are not obliged to look only to the local market. But if the price is raised much more, it is contended by competent authorities that many of the struggling industries of Victoria will be destroyed and will cease to be consumers of coal from New South Wales altogether.

ALLOWANCE FOR WASTE IN COAL CARGOES IN AUSTRALIA.

For many years there has been in vogue at Newcastle, New South Wales, a custom of taking certain percentages from the gross weight of coal cargoes and giving bills of lading for the net quantity only. The idea was to allow for the wastage which it was thought took place in various ways between the time of weighing the mineral on the Government weighbridges and its delivery to the consignee at the port of destination. During the past eight or ten years, the practice has been to deduct in this way 2 per cent from the gross weight of foreign exportations and 1 per cent from those

intended for intercolonial markets. In case of, say, a 6,000-ton cargo bound for a foreign port, there is therefore a deduction of 120 tons, and not only do colliery proprietors lose payment for this quantity of coal, but the shipowners likewise lose the freight upon it.

Complaints on this score have been made within the past twelve months, and it has been decided by the colliery proprietors that from January 1 next the deduction for wastage in foreign cargoes will be reduced to 1 per cent, while no allowance whatever will be made in the case of intercolonial shipments.

F. W. GODING,
Consul.

NEWCASTLE, *September 21, 1900.*

RAILWAYS IN JAPAN.

Consul-General Bellows forwards from Yokohama, October 3, 1900, the following clipping from the Japan Times of even date:

The total length of all railways in Japan at the end of the thirty-second fiscal year (the 31st of March, 1900) was 3,635 miles 42 chains, of which 832 miles 73 chains belonged to the Government and 2,802 miles 49 chains to the private companies, showing increases of 64 miles in the governmental railways and 159 miles in the private railways, a total of 223 miles compared with the figures of the preceding fiscal year. The total length allotted to the principal owners is as follows:

	Miles.
The Governmental Railway	749.3
The Hokkaido Governmental Railway	83.42
Total	832.72
The Nippon Railway	857.07
The Kyushu Railway	330.18
The Sanyo Railway	280.05
The Hokkaido Colliery Railway	207.06
The Kansai Railway	148.24
The Hokuriku Railway	84.52
The Sobu Railway	71.77
The Hankaku Railway	68.33
The Hoshu Railway	52.75
Others (under 50 miles)	701.72

There are at present fourteen companies with the total capital of 169,900,000 yen ($84,610,200), and this, added to the governmental outlay for the railway construction, makes the whole amount invested in railways in Japan 250,000,000 yen ($124,500,000). If all the debts of the companies and capitals of those companies which have not yet opened to railway traffic were added, it would amount to more than 300,000,000 yen ($149,400,000).

The total income from the governmental and private railways in the thirty-second fiscal year was 38,210,000 yen ($19,028,580), of which 24,460,000 yen ($12,250,800) were passenger receipts, 12,690,000 yen ($6,319,620) goods receipts, and 1,050,000 yen ($522,900) miscellaneous receipts. The total income shows an increase of 6,500,000 yen ($3,237,000) compared with that of the preceding fiscal year, and this

increase was caused by the raising of fares and lengthening of the railway. The daily incomes per mile of the chief railways are as follows:

Railways.	Daily income.	
	Yen.	
Tokaido Railway	67.73	$33.72
Shinetsu Railway	29.23	14.65
Hokuriku Railway	25.16	12.53
Nippon Railway	25 75	12.82
Kyushu Railway	37.53	18.69
Sanyo Railway	25.11	12.50
Hokkaido Colliery Railway	21.93	10.92
Kansai Railway	22.74	11.32
Hokuetsu Railway	13.82	6.88
Sobu Railway	27.22	13.55
Hankaku Railway	15.75	7.84
Hoshu Railway	37.80	18.82
Osaka Railway	38.43	19.14
Gan-etsu Railway	10.36	5.16

The average number of locomotives, passenger cars, and luggage cars per mile is as follows:

Railways.	Locomotives.	Passenger cars.	Luggage cars.
The Kyoto Railway	0.46	1.51	4.38
The Shinetsu Railway	0.35	0.62	3.54
The Hokuriku Railway	0.24	0.83	2.45
The Nippon Railway	0.33	0.94	3.86
The Kyushu Railway	0.46	0.02	10.77
The Sanyo Railway	0.3	1.15	3.36
The Hokkaido Colliery Railway	0.25	0.38	5.35
The Kansai Railway	0.36	1.83	3.45
The Sobu Railway	0.26	1.11	3.2
The Hoshu Railway	0.38	0.96	11.24

FOREIGN INSURANCE BUSINESS IN JAPAN.

Under date of September 30, 1900, Consul-General Bellows, of Yokohama, sends, in print, the following translation of an imperial ordinance, promulgated September 27, relative to agencies of foreign insurance companies in Japan:

ARTICLE 1. A foreign company desirous of engaging in the insurance business in Japan by appointing agents must have a legal representative specially appointed for Japan.

The provisions contained in article 62 of the commercial code shall apply correspondingly to the representative mentioned in the foregoing clause.

ART. 2. The foreign company must report to the proper authorities the head office for its business as pursued in Japan and the name and address of its representative.

ART. 3. In making application for license, the foreign company must send in with its written application the following documents:

(1) Articles of association.

(2) Specifications of the business as pursued in Japan.

(3) Contracts relating to ordinary insurance.

(4) Documents for computing premiums and method of computing the "net value."

(5) The latest inventory of property, balance sheet, and profit and lost account.

(6) Documents showing how, in the case of life-insurance businesses, the "net value" is utilized.

No alterations in the documents mentioned in 1, 4, and 6 of the preceding clause will be valid unless such alterations have obtained the approval of the proper authorities.

ART. 4. If the foreign company has violated an order of the authorities, the prosecution of its business in Japan may be suspended or the change of its representative may be ordered or its license may be declared void.

ART. 5. When judged necessary, the authorities may order the foreign company to deposit with them a suitable amount of money. In this case, the money may take the form of value bonds approved of by the authorities.

ART. 6. A policy holder, a person insured, or a person entitled to receive a policy in Japan and the partners of a foreign mutual assurance company shall enjoy a prior claim to the deposit.

ART. 7. The general creditors in Japan of a foreign mutual assurance company shall enjoy a prior claim to the money kept in trust over the partners of the company and the creditors abroad.

ART. 8. The foreign company shall make once in every year, at a previously fixed period, a report on the business conduced in Japan and shall present it to the authorities.

ART. 9. A copy of the inventory of property, of the balance sheet, business report, and profit and loss account compiled by the foreign company in its own country shall be promptly presented to the authorities.

ART. 10. The representative of the foreign company shall keep at the head office in Japan the articles of association of the company, the list of officials in Japan, and also the documents mentioned in article 2.

A policy holder, a person insured, or a person entitled to receive a policy in Japan shall be entitled to inspect the documents mentioned in article 2 or to demand a copy or abridgment thereof. In such case, however, the charge prescribed in the articles of association or the insurance contract shall be paid.

ART. 11. When the foreign company has wound up its business or has had its license invalidated, the return of the money kept in trust may not be demanded, unless the payment has been made to those enjoying the right of priority in accordance with the provisions of articles 6 and 7 and unless proper security has been given.

ART. 12. When the authorities have abrogated the license issued to the foreign company which possessed a branch or a representative in Japan, the fact must be reported at once at the registration office in whose jurisdiction such branch or office is situated.

When the registration office has received the communication mentioned in the preceding clause, the registration of the branch or office must be canceled at once.

ART. 13. The representative of the foreign company shall be liable to a fine of from 5 to 500 yen ($2.49 to $249) in any of the following cases:

(1) When the registration prescribed in this regulation has been neglected.

(2) When the documents specified in articles 8 and 9 are not provided or the matters to be entered therein are not entered or are fraudulently entered.

ART. 14. The representative of the foreign company shall be liable to a fine of from 10 to 1,000 yen ($4.98 to $498) in any of the following cases:

(1) When business other than insurance business is transacted.

(2) When life insurance is combined with "risk" insurance.

(3) When orders of the proper authorities are violated.

(4) When inspections conducted by the proper authorities are obstructed.

(5) When false information is given to the authorities, or when facts are concealed.

(6) When, without justifiable reason, leave to make an examination of the documents to be put in for examination according to this regulation is refused or a copy or abridgment thereof is not given.

ART. 15. The provisions of article 206 to article 208 of the law of noncontentious cases shall be applied correspondingly to the fine prescribed in the preceding two articles.

ART. 16. The provisions of articles 1, 3, 4, 7, 9, 10, and 11 and of article 97 of the law of insurance shall be applied correspondingly to foreign companies.

ART. 17. Articles 9, 11–15, 19–38, 40, 41, 255–258 of the commercial code, articles 85, 86, 90, and 91 of the law of insurance shall be applied correspondingly to foreign mutual assurance companies.

ART. 18. At every registration office, a foreign mutual assurance company list shall be provided.

ART. 19. When, as a result of having established a business office in Japan, a foreign mutual assurance company wishes to make application for the registration of such an office, the representative of the company must submit a written application to the proper authorities, entering the head office in Japan as well as the name and address of the company's representative in Japan, and must at the same time submit the following documents:

(1) Documents to prove the existence of the head office.

(2) Documents certifying the competency of the representative.

(3) Documents describing the articles of association and the nature of the company.

(4) Partners' list in Japan.

(5) Copy of the license and of the letter of identification issued by the proper authorities at home.

The documents mentioned in 1 to 3 of the preceding clause must have the certification of the home government or of the proper consul stationed by that government in Japan.

ART. 20. In case the representative of a foreign mutual assurance company applies for permission to register the company's agent in Japan, the application must enter the date of the Japanese registration of the establishment of its business office in Japan and must submit at the same time documents certifying the appointment of the agent.

ART. 21. Articles 139, 141–149, 151, 154–165, clause 1 of article 173, clause 2 of article 174, and articles 203 and 204 of the law of noncontentious cases shall be applied correspondingly to every foreign mutual assurance company.

ART. 22. Articles 1–6, 8–11, 13–16 of this regulation shall be applied correspondingly to a case where a foreigner pursues insurance business in Japan by creating a branch therein.

SUPPLEMENTARY RULES.

ART. 23. This regulation shall be enforced from November 15, 1900.

ART. 24. A foreigner or a foreign company possessing a branch office or agency in Japan prior to the enforcement of this regulation must report to the proper authorities, within six months from the date of the enforcement, the head office in Japan.

ART. 25. Articles 4–15, 17, 20 of this regulation, articles 1, 3, 4, 9–11, and 97 of the law of insurance, clause 1, article 173, and clause 2, article 174, of the law of noncontentious cases shall be applied correspondingly to a foreigner or foreign company which possesses in Japan, prior to the enforcement of this regulation, a branch office or agency.

The Department has received a report from Minister Buck, of Tokyo, dated October 8, 1900, covering the same information. Mr. Buck adds:

Article 14, respecting fines to which foreign insurance companies are liable for certain acts and delinquencies, includes among other provisions: (1) When business other than insurance business is transacted; (2) when life insurance is combined with "risk" insurance. A literal construction of these items would seem to prohibit anyone engaged in any class of insurance business from doing any other kind of business. I understand, however, that these two provisions are intended only to prohibit representatives of foreign insurance companies, registered to do business in a particular kind of insurance for some one company, from doing business, whether insurance or other, for engaging in which they have not registered.

AMERICAN FRUIT IN CHINA.*

Fruits grown here comprise peaches, pears, and apples. A few very fine peaches are raised; but the majority are of the clingstone variety and inferior in quality as compared with the American peaches. The principal enemy to peach growing here is the peach worm that infests the fruit and is similar to the codlin moth in the apple. These worms are not combated in any way by the growers and are so plentiful that it is almost impossible to find any fruit free from them.

The pears are of several varieties, but are very inferior and universally infested with codlin moth.

APPLES.

All the apples that I have yet seen in this market are of a small, sweet, tough variety. Those that I have examined show traces of the codlin moth, but are not as badly affected as are the pears. I was surprised to find the apples in many instances covered with the San José scale. I do not know how long this pest has been here, and whether it has any natural enemies or not. As they do nothing to combat the scale, if it has been here long, it must have some natural enemies to hold it in check or it would be in greater evidence.

So far, I have not seen apple scabs or fungus growths on any of the fruit, to the extent of injuring it, and am inclined to think that the climate is too hot for the growth, although the air contains enough moisture to make it thrive.

As to the matter of a market for Oregon apples, there have been

* This report was made in answer to inquiries by the Oregon State Board of Agriculture, which has received ADVANCE SHEETS.

several shipments from Washington and more are ordered. There will probably be as many as 1,000 boxes imported during this year.

The foreigners consume the imported apples; the Chinese fruit answers all the requirements of the natives. The great cost of apples here materially limits the consumption. They are usually sold at retail at 15 cents Mexican (7½ cents United States) per pound.

Dealers order only in small quantities—from 10 to 100 boxes at a time. These come by steamer either from San Francisco or Vancouver, British Columbia, and usually reach here in bad condition, caused either by poor packing or careless stowing on board ship.

Apples coming to the Orient should be packed just before shipment in standard boxes, with each apple wrapped in paper and a layer of cardboard between each tier of fruit and on top and bottom of box. There are many varieties that should not be shipped here, such as the Baldwin. The best kinds for this market are Bendavis, Winesap, and Yellow Newtown. There are few varieties that will stand the long ocean trip as well as these.

There will never be a very large market here for such fruits, until some plan is devised to get them into the hands of the consumers at a much less cost than at present. Something might be done to increase the market by introducing the American apple to the tables of the well-to-do Chinese.

PRUNES.

Regarding the market for prunes, I find it equally limited, and confined to the foreigners.

The natives have a plum that they dry and use to a limited extent, but it does not seem to enter into the food consumption of the great mass of Chinese. The standard of living of the ordinary Chinese is so far below ours in the cost and character of food consumed that it seems impossible to us, and a statement of plain facts appears like the most extravagant exaggeration. As an example, the servants in some of the best places in Shanghai club together and pay a cook to provide and prepare their food for them at a cost of $2.50 Mexican per month, or about $1.25 per month in gold, or a fraction over 4 cents per day in our money.

These people live much better than the average. I feel safe in saying that the average cost of food consumed by the Chinese does not exceed 2 cents gold per day.

In the interior, wages range about as follows, per day:

	Cash. Cts.
Carpenters	160=10
Masons	160=10
Blacksmiths	160=10
Laborers	140= 8

The cheapest laborers work for 3,000 cash (equal to $3.75 Mexican) per month, which amounts to 12½ cents per day in silver.

It will readily be seen that the masses of China will never consume many prunes at a rate that will net the producer 3 cents gold per pound.

A present and future market for American fruit can not be expected among the masses of China.

I find the California French prune here, and paid 25 cents Mexican per pound for exactly the same grade that I sold from my orchard last year for 3 cents gold. These are bought by dealers here in lots of from 5 to 20 boxes of 25 pounds each.

Unless there is an opportunity to create a market for the Oregon prune in northern China among the Russians, I can see no extensive opening for it in the Orient. California prunes in boxes reach this market in good shape and are very nice.

HENRY B. MILLER,
Consul at Chungking.

SHANGHAI, *September 21, 1900.*

BUTTER IN CHINA.*

Butter and cheese were imported into Shanghai during the year 1900 from France, Denmark, Australia, Sweden, and the United States to the value of over $100,000—much the greater part of this being butter. Butter is shipped in tubs, in tins of half a pound, 1 pound, and 2 pounds, and in the common quart fruit jars holding 2 pounds. Some of the best butter in this market comes in fruit jars from California. This retails at $1.75 Mexican (87½ cents United States) per jar, is the highest priced butter sold here, and on that account is not extensively used.

The weight of jar and necessary packing makes the freight much greater than on butter in tins. Tins are preferred.

Large orders are being placed now for Australian butter that retails at 60 cents Mexican (30 cents United States) per pound in 1 and 2 pound tins.

There is no import duty on butter here.

There is a general complaint against United States butter in tins, which I am inclined to believe is due to lack of knowledge on the part of packers of the proper method of putting up the butter.

The principal complaint made by dealers here is that there is usually a deterioration in the quality after a few shipments. The

* This report was made in answer to inquiries by a resident of Oregon, to whom ADVANCE SHEETS have been sent.

French butter is a remarkable example of this. At one time, this was preferred to any, and it was practically in control of the market. It was so popular and the demand for it so great that the temptation to adulterate it was sufficient to cause the makers to turn everything possible into butter, and I have just been informed by a very prominent dealer that because of the adulteration he has discontinued entirely the handling of French butter.

A good brand of butter that is once established and maintains its quality can count upon a permanent and increasing trade. It is necessary to have the tins stained to prevent rust, and brands should be stamped on the tins instead of being pasted on with paper.

It is of great importance to have the package as neat as possible and in such form as will retain not only the good quality of the contents through all conditions of climate, and especially very warm weather, but its neat appearance as well. It must especially be preserved against rust.

The Australian butter in tins is very neatly branded in colored inks on the top of the can. The can is provided with a rolling opener, so that the top can be lifted and replaced tightly, all of which is necessary.

Butter in rolls or 2-pound blocks is shipped to this market in brine during the months of November, December, January, February, and March, and can be satisfactorily handled in this shape during these months. Mistakes and failures have been made by sending butter in this form at other seasons, either earlier or later, when the weather is too warm.

The importation of butter and cheese into this port was:

1897	$64,800
1898	80,500
1899	104,390

The demand for good butter in the Philippines, in Japan, and along the entire coast of China is increasing very fast and is bound to assume immense proportions; and with the ability of the Pacific coast States to produce excellent butter at reasonable cost and under favorable conditions, it only remains for the creameries and dealers to master the proper method of packing and handling to secure this trade. With this growing market, more convenient to our Pacific coast than to any other butter-producing country, with the many lines of steamers coming here from that coast, it seems a matter of importance to our Western States to secure this trade.

I would also call attention to the increasing importation of condensed milk and cream at this port. During last year, there was imported here from various countries $55,000 worth of canned milk

and cream. I can see no reason why our Western States should not secure a large part of this trade also. In 1897, the importation amounted to $34,560; in 1899, to $54,750. There has no doubt been an equally great increase at other ports of the Orient.

The most difficult problem in securing and holding the oriental market for pure dairy products is the competition of various forms of so-called butter. The manufacturers of these spurious articles are free to make all manner of adulterations and put them on the market labeled pure dairy butter. I attribute the low price of butter here now to this competition, and firmly believe from my own experience that the greater proportion of butter sold is a spurious product, although it is handsomely put up and branded as pure dairy butter. None of the large dealers has the product sold as butter tested by a chemist, and they are not certain of its purity.

The following is a list of general storekeepers who deal in butter and condensed milk:

Dunning & Co., Nankin Road; Yuen Tah, Broadway; Framjee Lorabjee & Co., Hong Kew; E. L. Moudon, Yang King Pang; J. Gaillard & Co.; Tom Pow Ching, Broadway; Charles & Co., Broadway; Pope & Co., Nankin Road; Hall & Holtz & Co., Nankin Road; Lane, Crawford & Co., Nankin Road; American Trading Company; F. A. Blake & Son.

HENRY B. MILLER,
Consul at Chungking.

SHANGHAI, *September 19, 1900.*

QUININE AUCTION IN BATAVIA.

Vice-Consul Rairden reports from Batavia, September 12, 1900:

The fourth public auction sale of Java quinine was held at the Merchant's Exchange in this city on the 29th day of August, 1900, and the following were the prices realized:

(1) Editio I, consisting of 225 lots of 450 cases, each case containing 4 tins of 2.835 kilograms (6.25 pounds) of quinine, and making a total of 5,103 kilograms (11,250 pounds), sold at 24.65 florins ($9.98) per kilogram (2.2046 pounds).

(2) Editio II, consisting of 30 lots, packing at purchaser's option, with weight not below 22.68 kilograms (50 pounds) and not above 25 kilograms (55 pounds) per case, sold at 26.10 florins ($10.49) per kilogram.

(3) Editio III, consisting of 10 lots of 10 cases, each case containing 24 tins of 1 kilogram of quinine, and making a total of 240 kilograms (529 pounds). Five of the 10 lots were sold at 28 florins

($11.26) per kilogram, and the remaining 5 lots, not bringing the limit, were not sold.

The average prices realized, taken at 25.98 florins ($10.44), are equivalent to 0.10½ florin (4.22 cents) for the bark at Amsterdam.

The next sale is to be held on the 26th instant and will consist of 4,045 kilograms, as follows:

	Kilograms.	Pounds.
450 cases, each 400 ounces	3,175.2	=7,000
Packing at purchaser's option	750	=1,653
Editio II, Pharm. Neerl. and British	3,925.2	=8,653
Editio III, Pharm. Neerl., in cases of 24 kilograms	120	= 265
Total	4,045.2	=8,918

EXCHANGE IN SIAM.

Exchange is higher in Bangkok just now than it has been for many years, due, no doubt, to the great demand for silver caused by the trouble in China and the concentration of foreign troops there.

Notwithstanding this great demand and the consequent high rate paid for silver, the Hongkong and Shanghai Bank in this city has locked up in its vaults to-day over 100 tons of silver ticals and the Chartered Bank of India, Australia, and China has over 80 tons of the same coin, which they would be glad to put into circulation.

The causes of this peculiar condition of affairs lie in two facts:

(1) I quote from a note handed me by the manager of one of the banks:

> Although all our rates, with the exception of Hongkong, are quoted in the same manner as in the Straits and Hongkong, nevertheless the silver tical is the currency of Siam and dollars do not circulate at all. To find the true tical-sterling rate, the sterling rate should be multiplied by 3 and divided by 5. The tical weighs about 236 grains and is minted from British or Mexican dollars melted down. The mint gives 80 ticals for $48, which is equal to a minting charge of 5¼ per cent. The mint will not accept bar silver for coinage into ticals.

(2) The disturbed condition of affairs in the Far East and the poor rice crop last year have seriously affected both the chief industries of the country—the teak lumber and rice trades—and closed the avenues through which this large amount of local coin finds its natural outlet.

HAMILTON KING,
Consul-General.

BANGKOK, *September 13, 1900.*

JUTE CROP OF INDIA IN 1900.

So much raw jute grown in India (about 15 per cent of the crop) goes to the United States to be manufactured, and such a large proportion (about 60 per cent) of the jute manufactures is shipped to the United States in the form of gunny bags and cloth, that it will be of interest to our manufacturers to know the probable output of the present crop.

The acreage sown in the twenty-six districts in Bengal, where nearly all of the jute of India is grown, was about the average of the last five years, but something more than that of last year, when the crop amounted to 5,000,000 bales of 400 pounds each. The average crop of the last five years was 5,581,000 bales, but the season has been more favorable this year, and it is estimated the present crop will amount to fully 6,000,000 bales.

R. F. PATTERSON,
Consul-General.

CALCUTTA, *October 10, 1900.*

THE FUTURE POSSIBILITIES OF SIBERIA.

The world has now to deal with a new factor. Ten years ago, the name "Siberia" called up a picture of wastes of snow and ice, boundless tundras (steppes), and coasts white with icebergs. To-day, the same Siberia is a land filled with thriving villages of peasant farmers, producing grain and various vegetables. That great compeller of civilization, the railway, has broken down the bars between the world and Siberia.

Besides its countless resources of the soil, besides its rivers filled with valuable fish and its forests inhabited by fur-bearing animals, Siberia is now beginning to show to the world its resources of gold, iron, copper, manganese, quicksilver, platinum, and coal, the yearly output of which is but a feeble index of what it will be when the deposits are developed.

In the past three years, several American mining engineers have traversed various parts of Siberia and central Asia. The testimony of these gentlemen is corroborated by that of other foreign engineers who have visited the country—that the lack of exploitation of such evident mineral wealth as is found here is unparalleled in other parts of the civilized world. Of these resources, gold is by far the most important, as it is, curiously enough, the least developed. Taking the product of the Russian Empire approximately at $25,000,000 in gold per year, it seems comparatively insignificant. It places

Russia fifth among the gold producers and is but little more than the present annual gold output of the State of Colorado.

According to the reports of Mr. C. W. Purington, an American mining engineer, whose last two seasons have been spent in Siberia, the bulk of the Russian gold product comes from Siberia, a considerable portion from the neighboring Ural chain, and an insignificant portion from Finland, Turkestan, and other portions of the Russian Empire. The greater part of the Siberian product is from the region to the north of the Amur River, about the sources of the Lena and Olekma rivers. The product of Siberia in gold, though small as compared with that of the United States or the Transvaal, is yet great enough to make it an important factor in the world's economy. Yet, it is almost entirely placer gold, and the quartz veins and original deposits of gold, though exposed to view in many places, both in the Ural Mountains and Siberia, have been hitherto unworked in any but the most inefficient manner.

Furthermore, antiquated and expensive methods are in use by even the largest companies for working the placer deposits; these methods having undergone no improvement during the last fifty years. At numerous mines in Siberia, two thousand men and five hundred horses are used on a single property to produce gold not exceeding $2,000,000 per annum. In some cases, as in the platinum mines of the Ural, the above-mentioned quota of men and horses is employed for an output not exceeding $800,000. This on ground, too, where the employment of dredges and mechanical excavators is in all ways feasible, and where oftentimes the auriferous gravel could be advantageously conveyed to the washing machines by wire-rope gravity trams. Mr. Purington states that, according to conservative calculations, if mechanical conveyors and improved types of sluices were installed in mines in Siberia at present worked by the old methods, the gold output of the Russian Empire would be increased at least three times over its present amount. On account of the general flatness of the country, mining by means of hydraulic power will never have a great future in Siberia; but in many districts sufficient grade can be obtained for the use of hydraulic elevators. For dredging river beds, the method of placer mining now pursued with such success in California, Montana, and New Zealand could well be employed in the Siberian gold fields. It may be said that the miles of auriferous river beds capable of being so worked number tens of thousands. This statement will seem the less improbable when it is considered that Siberia is a country inside of which the whole of the United States could be placed with plenty of room to spare, and that vast portions remain unexplored, as yet, even by the Russians.

Of the quartz deposits in Siberia, it may be said that they are entirely undeveloped. There are probably to-day not over a dozen stamp mills operating in the whole country, and it is doubtful if over one hundred and fifty stamps are dropping. Of the old roller-type gold mills, there are also a few. It is a significant comment on the quartz ledges of the country to say that even with the make-shift contrivances in use, the operations frequently pay large profits. Deep mining is unknown; it is doubtful if there is a single shaft in the limits of the Russian Empire which has penetrated a precious-metal deposit to a depth greater than 700 feet. At water level, where the free-milling ore stops and sulphurets begin, work is discontinued; and, except in two or three instances along the Ural chain, the working of concentrates by cyaniding or chlorination is unknown. So far as known, only one operator, Mr. de Zelienkoff, mining in Kochtar and southern Ural, has installed thoroughly up-to-date milling, concentrating, and chlorination plants.

In the districts along the Yenisei River, quartz veins with visible free gold and uncovered for lengths varying from a few to many thousands of feet may be seen in the old placers and penetrating the surrounding hills. In the Onon River district, in the region of the Trans-Baikal, quartz mining of immense masses of ore has been carried on in a desultory and inefficient manner for several years. The largest mill in the region is of twenty stamps, and, as described by Mr. Levat, French mining engineer, in an excellent published report on that district, is just the reverse of what an efficient gold mill should be. In the Ural Mountains along the River Serebrana, Mr. Purington, while examining a placer deposit, discovered an immense low-grade lead of auriferous slate of over 500 feet in width, which, on being sampled, gave results in gold equal to those of the celebrated Treadwell deposit in Alaska, on Douglas Island. It can not be doubted that numbers of such deposits exist throughout Siberia, affording opportunities for the installation of large stamp mills, with accompanying concentration and reduction plants.

The difficulties of transporting machinery to such deposits are much less than generally supposed. Of high mountains, such as the Rockies and Sierra Nevada, Siberia has practically none. In the Caucasus alone are precipitous peaks and high passes. As is well known, the interior of Siberia is penetrated by a network of vast water ways, rendering inland transportation easy and cheap. Heavy freight can be laid down in central Siberia, at the majority of the mines about the Yenisei River, at prices not exceeding $40 a ton from New York. If water transportation is made use of, this price may be reduced nearly one-half. It is perhaps not generally known

that freight loaded at Hull, England, is transported via the Arctic Ocean to the mouth of the Yenisei River, where, being reloaded to steamers of lighter draft, it is shipped direct to Krasnoyarsk, the crossing point of the Trans-Siberian Railway, and even as far south as Minusinsk, close to the Mongolian frontier. From San Francisco to the gold mines of the Omgoon River, in eastern Siberia, it is a matter of water transportation entirely, the route via the Amur and Omgoon rivers being navigable to steamers the whole distance to the mines. The same is true of many of the rich placers along the Zeya and Selimga rivers, farther up the River Amur. Regular steamer lines, furnishing excellent accommodations for passengers, ply during the open season from Nicolaievsk, the mouth of the Amur, to Stretensk, the present terminus of the railway, a distance of nearly 2,000 miles. It is now possible to go from New York, via Berlin, Moscow, and Irkutsk, to Vladivostock on the Pacific in twenty-five days. A railway which shall almost connect Asia and America at the Bering Straits may be predicted as of the future. There is, engineers say, no obstacle in the way except the terrific cold of winter and the immense fields of tundra through which a path must be cut. A railway line through such a country as northeastern Siberia will not be so difficult to construct as was the line of the White Pass and Yukon route.

Prices paid for labor in Russia and Siberia are exceedingly low—from 15 cents to $1.50 per day, the laborers in every case feeding themselves out of their earnings. It will be asked why the variation in price is so great, and also how it is possible to hire miners for so little money. In the first place, the proximity or remoteness of centers of population and agriculture is responsible for the widely differing scales of wages. For example, in the region of the southern Urals, where much grain is raised and where the country is thickly settled, the labor of men and of women at the placers is paid from 30 kopecks (15 cents) up to 70 kopecks (35 cents). In this region, the labor of a man with horse and cart costs but 45 cents per day of ten hours. This statement is vouched for by all who have collected economic figures of the district. In the northern Urals, the prices are about 25 per cent higher. In central Siberia, men are contracted for by the year at $15 per month; while in northern and eastern Siberia, in the regions of intense cold, wages range from $1 to $1.50 per day, according to the remoteness of the mine from the center of supply. Second, the reason of the cheapness of mining labor in Siberia is that the wants of the people are few. The workmen are of the peasant class, and it may be said that the larger proportion of them can neither read nor write. Their food consists of mutton, black bread, domestic fowls, eggs, milk, and tea. Most of

the necessities of life are supplied by their own farms or gardens, and their purchases, besides tea, sugar, and vodka (the national stimulant), are few. Their clothes cost but little, and their enjoyments are usually limited to the celebration of the numerous civil and religious holidays by mutual visiting and the consumption, in greater or less quantities, of vodka. It will be a natural query if the labor supplied from such sources and nourished in so primitive a fashion is efficient. It is said that in no country can men be found who more cheerfully sustain the hard labor, privation, and sudden and severe changes of climate than the Russian and Siberian peasants. Witness, for example, the notably efficient service rendered to the Russian army by the Cossacks, who are nourished and reared in the manner described above. No more hardy and enduring men can be found in any country. The bulk of the mining labor is Russian, while in the Ural many Tartars and Bashkirs are employed, and in eastern Siberia the miners consist, besides Siberian peasants, of Chinese and Manchu coolies.

That laborers in Siberia will at once alter their methods, exchange their awkward picks, shovels, and axes for those of American manufacture, and take hold of the operations connected with a California quartz mill or repair a hydraulic ditch, is not to be expected. The largest Siberian washing machine at the present day does not work over 750 cubic yards of gravel in twenty-four hours. Such an operation involves the labor of over one hundred men and from forty to sixty horses, costs from 16 to 23 cents per yard worked, and does not in any case save over 80 per cent of the gold. California methods now in use, I am informed, work from 1,000 to 2,000 cubic yards per twenty-four hours, the operation involving the labor of perhaps twenty men at the outside, at a cost varying from 1 to 8 cents per yard, while the amount of gold allowed to escape is so nearly insignificant as to be a negligible quantity.

One important feature in connection with the conducting of mining operations in Siberia is the aptitude of the Russian workman for the ax. Wood is so plentiful in the country that in no case will the price for fuel exceed $1 per cord, and mining timbers may be figured on at a correspondingly low rate. The current anecdote that a Russian workman will, for a 20-kopeck piece, lay his left hand with fingers spread on a board, and with full strength make an ax cut between each finger can not be vouched for; but it is certainly true that in pick timbering in bad ground, in erecting buildings, log cabins, and all manner of wood joining the equal of the Russian peasant can not be found. In the copper mines of the Ural, at Tagill and Bogoslovsk, where practically the only example of deep underground mining in the Empire may be seen, the timbering is

sufficiently solid to have sustained the Pyramids of Egypt; and, although clumsy and ill directed in the extreme, the example shows what may be done by the same miners under sensible supervision.

It is a statement the truth of which has been determined by experience that if the Russian peasant be treated by his foreign employer with tact and consideration, he proves, in the majority of cases, an efficient and willing worker.

The mining laws of Russia allow the taking up of mining claims indiscriminately by Russians or by foreigners.* The only persons not allowed this are Jews, clergymen, and persons not in possession of their civil rights in their own country. Claims consist of 280 acres of land, generally surveyed at the locator's option, with a length of about 2½ miles and a width of from 700 to 1,000 feet. A quartz claim contains the same number of acres, but is generally more clearly surveyed, in a form of a square, with boundaries 3,500 feet, or 1 Russian verst, long. The form of the claim is at the locator's option, and the only restriction placed is that the width shall not be less than 700 feet. At location, but one stake is driven, which is sufficient to hold the location for two years, during which time it is expected that a Government survey will be ordered by the locator. On the completion of the survey the Government title is given, corresponding to a Land Office patent. The locator then becomes the holder of the claim and the owner of all minerals therein contained, on condition of an annual payment to the Government of $50. No development work is required, either before or after the patent is obtained. No limit is placed upon the number of claims which an individual can locate. Several American engineers, among them Mr. B. E. Keating, of Providence, and Mr. C. W. Purington, of Boston, have recently received patents to groups of placer claims in Siberia, where extensive dredging operations are now being undertaken by American syndicates. It is impossible to estimate the number of miles of gold-bearing creeks still free for location in Siberia; but since it is absolutely impossible to work low-lying gravels by Siberian methods now in vogue, and since these gravels are in consequence deemed comparatively worthless by the Siberian gold miner, the amount of free land must certainly be enormous. In California, at the present day, gravels along the Father River which contain but 15 cents to the cubic yard in gold are being worked at

*NOTE BY BUREAU OF FOREIGN COMMERCE.—While this statement is true, there are many severe restrictions. Application must be made in person at Vladivostock or St. Petersburg. References are demanded, statements as to the character and experience in mining of the applicant, capital to be employed, etc.; and there are long delays in considering such matters. In some sections of Siberia, the Russian Government will not grant permits until after it has investigated conditions there. In this connection, see ADVANCE SHEETS OF CONSULAR REPORTS No. 701 (April 11, 1900), No. 754 (June 13, 1900), and No. 808 (August 15, 1900); CONSULAR REPORTS No. 237 (June, 1900), No. 239 (August, 1900), and No. 241 (October, 1900).

a profit, and this with labor at from $2.50 to $3 per day and fuel at from $3 to $5 per cord. In Siberia, river beds of a similar character will carry on an average not less than 20 cents in gold to the cubic yard of gravel, while, as shown in the statements above, the cost of working should be materially less.

Cities of from 10,000 to 50,000 inhabitants are now numerous in Siberia. Hotels supplied with comfortable rooms, restaurants which may truly be said in many cases to be palatial, electric lights, and telephone connections are not difficult to find. One may now traverse Siberia with his hands folded, if he so wishes; as the elegant weekly vestibule, supplied with bath, piano, dining saloon, drawing-room, leather sofas, easy chairs, and observation car—the whole fitted with electric lights and call bells—rolls from Moscow to Irkutsk. The cost of this remarkable journey of 3,200 miles, including sleeper, is but $44, first class.

To the majority of the inhabitants of St. Petersburg and Moscow, Siberia is as unknown as it is to the people of the mountain districts of Tennessee. When men of affairs in Moscow were asked what clothes to take to Siberia, they replied that furs were always necessary on account of the intense cold. Actual experience in the city of Krasnoyarsk showed that the thermometer registered 110° for days together in the month of August, and any clothes but those made of silk and linen were absolutely unendurable.

But let Siberia speak for herself; let the globe trotter get away from the Cook agencies for a month and see a new world, where elements of strength and virility soon to be felt in the struggle for existence are but waiting to develop under the touch of western enterprise. Some advance has already been made, as is evident when American mowing machines are seen rattling through the streets of Tomsk and a policeman may be noted riding a United States bicycle through the dusty highways of Krasnoyarsk. The beginnings are small, but the straws blow with the wind of progress.

THOMAS SMITH,

MOSCOW, *October 8, 1900.* *Consul.*

COLONIZATION OF SIBERIA.

During the past few years, the colonization of Siberia has been making rapid progress. This is to be attributed solely to the construction of the Siberian Railway.

In 1893, a commission was appointed by the Russian Government to promote and manage the settlement of Siberia. The sum of $10,615,000 was placed in the hands of the commission, to use in furthering the emigration of Russian peasants to the newly opened

regions. The record of this emigration from Russia proper to Siberia is as follows:

	Number.
1896	203,000
1897	87,000
1898	206,000
1899	225,000

One-half of these emigrants went to the province of Tomsk, the rest to the provinces of Tobolsk, Yenisseisk, and Ukmonilik. The emigrants in traveling over the Siberian Railroad have a well-organized hospital car attached to their train, which very materially reduces the mortality list. The construction of this road has greatly reduced the cost of emigration. Ten years ago, the cost of a trip from central Russia to Tomsk was $35 per capita; to-day it is only $9.

The Russian Government grants subsidies for the purpose of helping new settlers. This money is spent in encouraging farming and fruit raising. Subventions are given for the first six years; during the following ten years these subventions must be repaid in yearly payments. Since 1894, $2,605,500 has been spent in this way. In the newly settled districts, 400 churches and 73 schools have already been built, and 65 churches and 32 schools are in progress of construction.

ERNEST L. HARRIS,
Consular Agent.

EIBENSTOCK, *October 6, 1900.*

QUARTZ MINING IN SARELA, CENTRAL SIBERIA.

A visit to this remarkable locality was made during the month of September, the present year, by a party of Americans interested in gold mining, accompanied by Mr. C. W. Purington, mining engineer. The party consisted of Mr. W. S. McCormick, a mining man of Salt Lake City, Mr. N. C. Egbert, of Springfield, Mass., Mr. C. C. Ivanitsky, a large operator of Siberia, and Mr. Purington.

The quartz-mining district lies about 100 miles to the south of the line of the Trans-Siberian Railway and in the mountains lying about the head waters of the River Sarela, which flows into the Nyus, and this again into the Chulim, about 200 miles west of the Yenisei River. The party proceeded north from the town of Chibakee, the residence of Mr. Ivanitsky, and, turning off to the west of the main post road from Chibakee to the railroad, crossed the main Chorny Nyus River and followed up the valley of the Sarela. Along the lower course of this stream, the valley is more

than a mile in width, perfectly flat, and nothing more or less than an immense gravel bed. Low cliffs of limestone border the valley, the walls gradually approaching each other until near the head of the stream, where an immense amphitheater has been formed, fully 6 miles in diameter, with mountain walls rising to 2,000 feet above the meeting points of the five creeks forming the main stream. The main valley and its slopes are heavily timbered with birch, cedar, larch, and fir; but the domelike summits of the mountains are bare of all vegetation, except thick reindeer moss and bunch grass. The limestone, which has a great development farther east, here gives place to graphitic schists and dikes and masses of fine-grained porphyry. The creeks forming the head waters of the Sarela give great abundance of water, and so steep is the grade of the valleys in this upper portion (about 10 per cent) that waterfalls and cascades are everywhere seen.

It is only within a year that search for gold-bearing quartz veins has been made in the vicinity of the Sarela. The first discovery of auriferous quartz was, as usual in such cases, the result of accident, and took place directly in the trail leading to the high Altai region to the west. Search revealed more fragments of white quartz in the vicinity, all showing free gold, and finally a strong lead was uncovered. This was prospected along its outcrop, the strike being in a northwesterly direction for more than 1,000 feet. At the time of the visit of the Americans, the vein was sufficiently uncovered to show an average width of 10 feet, and free gold was seen in the quartz wherever pieces were broken off. A sufficiently long extent of this vein has been exposed to warrant the statement that the unusual abundance of visible gold does not occur merely in a narrow shoot, as is so often the case, but that here is a shoot with a length of at least 1,000 feet, if, indeed, it be a shoot at all.

This extraordinary vein led to others being looked for, and the result was that in at least twenty different places about the sides of the great amphitheater quartz showing free gold was found. In many cases, this quartz has been found by merely turning over a few square feet of reindeer moss with a shovel or a pick. Farther to the northeast of the vein just described, a still wider vein was uncovered and is being worked by Mr. Podvintseff, of Ekaterinenburg. This vein is now exposed down the side of the mountain by an open cut 200 feet long and by about 100 feet of tunneling. The exposures show a solid mass of quartz 20 feet wide from wall to wall, with very little horse matter. The work has been done in a most unskillful manner, and the great mass of quartz between the schist walls on the side of the mountain presents a most extraordinary appearance. About 500 tons of this material have been worked in

a crude mill, and, although free gold is seldom seen, the material has averaged $18 to the ton with the poorest kind of treatment. A new and better mill is in process of erection, but it is placed in a poor position and is of such small capacity that very little can be expected from it.

The majority of the quartz finds in this valley has been made in high places, the situation of the lead outcrops being such as to facilitate the tramming of the ore down from the workings to a mill located at the meeting point of the five streams, by means of converging wire-rope gravity lines. The topography is also favorable for the running of cross-out tunnels at comparatively low levels, and thus getting under large quantities of ore. Water power being practically unlimited in quantity, timber of excellent quality available, and winter freight rates exceedingly low ($5.50 per ton from the railroad), the district of Sarela appears to have many advantages as a mining country. The Americans, although familiar with the gold fields of Alaska, California, and the Rockies, were favorably impressed with the showing which the exceedingly small amount of prospecting had developed.

It is very unusual for free gold to play so large a part in undeveloped quartz outcrops as is here found. In one or two outcrops along the course of a strong lead there may be a showing of free gold, but for free gold to be found for hundreds of feet along the course of a vein wherever samples were broken off is sufficient to cause the old prospector to open his eyes. The quartz appears very lively in all the veins yet uncovered and exhibits the marks of decomposed sulphurets. It is therefore highly probable that the great majority of the free gold exists below the water level in the form combined with iron sulphide. It will, of course, after water level is reached, necessitate treatment of choridation or potassium cyanide. Water level in this particular locality must, however, lie at considerable depth, so that the tenor of these veins may be thoroughly established by the use of small mills, of free-milling capacity only, before the refractory portions of the veins are encountered. The walls are well defined, and the principal veins all strike in the same direction, showing that it is a country of continual and regular leads, and not of broken and irregular stringers. As the veins are for the most part nearly vertical and are subject to no sudden distortions of the structure, mining here should be a comparatively easy operation, and it is not likely that excessive amounts of timber would be required.

It is a well-known fact that the climate in southern Siberia is perfectly healthy and, in some respects, most enjoyable. It is true that for five months in the year extreme cold is experienced

throughout the country, Fahrenheit temperature dropping as low as 30° and 40° below zero; but the fall of snow is very light, and the progress of quartz operating is no more impeded by winter conditions than in the mountain districts of Colorado and Utah. Naturally, all the machinery must be well housed and the mill heated in winter, but this is a small matter in a country with an inexhaustible supply of wood and where the cutting of it costs next to nothing. It caused amazement to the Americans that in inner Siberia, where they had imagined life unendurable in the winter months, this very time should be considered by the inhabitants the finest of the year. According to descriptions, the climate must correspond with that of portions of Canada and the Rocky Mountains.

The labor in this district also occasioned surprise. Here were men whose total cost to the operator, including food and transportation to and from the mine, was less than $15 per month, yet who were both intelligent and capable; hardy enough to work out the year round in this climate, to sleep if necessary on the hard ground without tents, and to live on dried black bread and soup meat. Mr. Purington, fresh from the South American gold-mining fields, where indolent negroes must be paid $1 a day for their poor work, expressed himself as highly gratified to find such good and economical labor in Siberia.

It is quite certain that the discovery of quartz veins in Siberia has but just begun. The well-known lack of ambition of the Siberian to improve his own condition, except by the means employed by his father before him, and his disinclination to extend his sphere of knowledge must be taken as the principal causes of the lack of quartz operations up to this time.

THOMAS SMITH,
Consul.

Moscow, *October 20, 1900.*

NEW RUSSIAN RAILWAYS.

Consul Monaghan writes from Chemnitz, October 13, 1900, that, according to a report from Russia, the building of a new railway, which is destined to connect St. Petersburg with Odessa, is being discussed. These two cities are now joined by a line of railway, but it makes such a wide bend that it takes forty-nine hours to make the distance. The consul adds:

St. Petersburg and Odessa lie on the same meridian, which in a straight line amounts to a distance of only 1,500 kilometers (about 930 miles), and a line of railroad running direct would lessen the distance 400 kilometers (about 248 miles) and reduce the time of traveling to twenty-seven hours.

Another thing which recommends the building of this line is that several large cities—for instance, Kief with 260,000 inhabitants, Mohilev with 45,000, and Witebsk with 70,000—would also have direct communication with the capital. The scheme is receiving a great deal of attention.

The Department has also received a report from Vice-Consul-General Hanauer, of Frankfort, dated October 23, 1900, as follows:

The Russian Ministry for Communications has decided to build a new railroad line in the Donetz district next spring. This line will be 430 versts in length (a verst is about two-thirds of an English mile), with Wolonicha and Dolginzew as the terminal points. The new road will intersect the richest districts of the province Yekaterinoslaw, which produce enormous quantities of grain and contain large deposits of coal, to move which the double-tracked Katherina Railroad is entirely insufficient. The new road will take freights destined for the ports Marinpol, Berddiansk, and Nikolaiev.

AMERICAN BOOTS AND SHOES IN TURKEY.

The Department is in receipt of the following report from Consul Lane, of Smyrna, made in response to an inquiry by the editor of a New England trade journal:*

There is undoubtedly a large field here which might be opened to American leather goods. Ninety per cent of the boots and shoes used in Turkey are made in the country by hand. The people can afford only the cheapest quality of foot wear, but I believe American machine-made goods can be put on the market at better prices than the handmade articles now sold. The sale of fine shoes is very limited, and at present is hardly worth considering. Strong, durable, coarse boots and shoes, with thick soles, are popular. Leather and rubber overshoes are extensively used.

The shoes worn here are made on a last greatly differing in shape from the American last. I believe a factory undertaking to properly introduce American shoes should have a full line of samples of Turkish shoes with prices. The styles worn do not change each year, but the variety of lasts which are permanently used is very large.

Slippers are much more generally worn by all classes than in America. The ladies of the harems confine their foot wear almost entirely to slippers.

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*Who has received a copy.

The laboring classes wear heavy, cowhide low shoes as a kind of overshoe, with light slippers inside. Army officers wear high-top patent-leather boots.

There are no large retail shoe establishments such as are found in America, but the trade is supplied through numerous small bazaars.

Import duty on all articles is 8 per cent. Certificates of origin must accompany each shipment.

IRON AND STEEL IN TURKEY.

Consul Hughes, of Coburg, under date of October 23, 1900, sends the following translation from the Neue Wiener Tageblatt:

Though in nearly all the Turkish provinces iron ore is to be found, there are no blast furnaces nor manufacturing shops, and the finished-iron business is of the most limited description. Import into Turkey, both in iron and steel, is consequently of considerable importance, amounting to 60,000 tons annually, valued at 18,500,000 francs ($3,570,500). Imports at Constantinople alone are, on an average, 20,000 tons, worth 7,500,000 francs ($1,447,500), per annum. Chief supplies are sent from Sweden and Belgium, while England, which takes the first place in all other trade with Turkey, sends only about 6,000 tons per annum. Turkey imports from Austria-Hungary about the same amount as from England, but in the German business an improvement has been noticed of late. Formerly, the iron works of northern France did a strong business with Turkey, but they have long been compelled to give way to the more successful Swedish and Belgian firms. Quite recently, however, efforts have been made to recover the lost ground. What Russia sends to Turkey has not been of any weight hitherto, but her works have been trying hard to extend their trade with the Ottoman Empire from year to year. Besides railway and engineering requirements, iron bars and girders are the principal articles taken. The consumption in Constantinople increases rapidly and amounts to 3,000 to 4,000 tons annually, chiefly supplied by Belgium. The price for girders is from $25 to $30 per ton. The yearly export in bars from Belgium to Turkey amounts to 15,000 to 20,000 tons; the best sorts, however, are taken from Sweden. Tin plates and galvanized and corrugated sheets are almost exclusively imported from England.

STAVE TRADE IN AUSTRIA.

The decline in the Austrian stave trade continues, as the export statistics of Trieste and Fiume show. American staves have slowly found their way into England, France, Germany, and Italy and now compete in those markets successfully with the Austro-Hungarian product. Quite recently, our exporters have even invaded the Monarchy's home market, carrying, as it were, "owls to Athens" and "coal to Newcastle." This has caused great consternation in those

provinces in which stave making forms the principal industry, viz, Slavonia and Croatia.

The annual report of the chamber of commerce in Essek (Slavonia) for the year 1899 contains the following remarks:

Slavonian sawed oak timber, used for staves, still holds the foremost place in the markets of the world and need fear no competition. Split oak timber, however, holds a less favorable position. The production of "French" staves, until recently the largest and best-paying industry of Slavonia, shows a constant decline. In the year 1899, there were produced in Slavonia only about 15,000,000 staves, although the number exported in the same year from Fiume and Trieste amounted to 47,000,000 pieces, in which export Bosnia principally participated. The production of German cooper timber in Slavonia is resorted to simply from necessity. The competition of the American product makes itself felt more and more, for the superior Slavonian material is now looked upon by German coopers as too costly for their use.

The manufacture of French staves and of German cooper material, which formed not long ago one of the most remunerative branches of our wood industry, has now been reduced to almost nothing through a change of conditions in the production of the raw material and in consequence of the American competition.

We are unable to determine what economic or tariff measures should be adopted to meet this serious American competition, that we might at least remain undisturbed in our own markets. It is, however, absolutely necessary to do something in the proper quarters, as there is great danger that before long America will also turn her attention to the production of sawed oak timber. Any attempt to shut us out of the markets of the world is unlikely to succeed, thanks to the superiority of our products. Still, it is to be feared that the shrewd Americans, whose goods find their way into the very heart of Europe, owing to the cheapness of their raw material and the low rates of river and sea freights, will ultimately force down the prices of our products to such an extent that the manufacture thereof will not pay, on account of the high prices of our material.

Commerce is apt to follow those roads which offer the greatest advantages, and it should be our aim to turn trade into our own channels by all means at our command.

It should be noted that chambers of commerce in Austria-Hungary are official boards organized under the State law for the advancement and protection of the commerce and industries of their respective districts or provinces. The boards are represented as such in Parliament, and their advice is sought by the Ministry of Commerce in all important matters. The official utterances of these boards have therefore great weight, and it would not be at all surprising if, in the new Austro-Hungarian tariff law, the duty on oak timber and all its products would be materially increased.

FREDK. W. HOSSFELD,

TRIESTE, *October 11, 1900.* *Consul.*

GAS AND WATER EXPOSITION IN VIENNA.

Vice-Consul-General Hogue sends from Vienna, September 17, 1900, translation of a communication addressed to the consulate-general by the committee of the first gas and water exposition, to be held at Vienna in the year 1901. Circulars describing the exhibition, also transmitted, are summarized below:

The exposition is intended for the purpose of showing not only to professionals, but to consumers, the extraordinary progress made in the industries above mentioned during the last decade, and to serve the purpose of convincing of its value, through special exhibits, those who have not hitherto employed gas apparatus for purposes of lighting.

The exposition is intended to be very comprehensive and will show the historical developments in the gas and water department industries. Shops of the various branches of industry, completely furnished and in working order, will demonstrate the advantages of motor power.

It is hoped that the exposition will be liberally patronized with exhibits from foreign manufacturers, and be attended by those interested. Everywhere the conviction is met with that our gas and water department professionals, with their achievements in the province of lighting, heating, and power, can calmly enter the lists with their hard-pressing competitors in the province of electricity. To fix this conviction and impart it to the public at large is the main purpose of the exposition.

In all parts of the world, electric expositions have taken place during the past decades, but never, since the invention of gas production, which celebrates its centennial anniversary in the year 1901, has a large and special exposition, embracing all departments of gas and water technics, been arranged.

Vienna is found peculiarly suitable as the place for this exposition, for the reason that, during the coming year, the congress of the German Society for Gas and Water Department Professionals will convene in this city; also, because Vienna possesses the largest and most modern gas works on the Continent, and is just now about to create a second and equally important aqueduct; also, for the reason that from this city went forth the invention of the incandescent gaslight, which has conquered the entire globe in a marvelously short time; and, finally, on account of the happy geographical position of the city and its beautiful environs, which must and will attract a large number of visitors.

The exposition will take place in the Vienna rotunda, opening in June, 1901. It will be divided into a department for water technics and one for gas industry.

The production and application of gas will form the principal divisions of the gas-industry department and will comprise all the various kinds—anthracite-coal gas, water gas, oil gas, garbage gas, air gas, and acetylene, besides the machines and plants requisite for their production.

In the department for the uses of gas, all contrivances for lighting, heating, and cooking purposes, and especially those adapted for use as motors, will be exhibited.

In connection herewith a special department will be devoted to the modern dwelling house and a historical department to the development of street gas lighting and the providing of water for the public.

ENLARGEMENT OF TRIESTE HARBOR.

The imperial royal maritime office in this city announces that it will receive, on behalf of the Ministry of Commerce, sealed proposals for enlarging the harbor of Trieste.

The following are the proposed improvements, with the estimated cost of each:

Description.	Estimated cost.	
	Crowns.	
1. (*a*) Enlarging the Riva Carciotti	876,777	$177,985
(*b*) Laying the foundation for the outer turn bridge (9 meters=29.25 feet wide) across the Canale Grande	33,780	6,858
2. Laying the foundation for the inner turn bridge (12 meters=39.37 feet wide) across the Canale Grande	85,029	17,261
3. Building a pier in front of the health office	1,513,062	307,151
4. Enlarging the Riva Grumula	225,487	45,773
5. Building a wharf at the Molo Santa Teresa	127,182	25,818
6. Building a pier, a sea wall, and a breakwater at Sant Andrea	8,031,057	1,630,304
Total	10,892,374	2,211,151

The foregoing estimates do not include any dredging. For this work, separate proposals will be received. Contractors may either furnish their own dredging machines or use machines supplied by the Government. The estimated cost of this work is as follows:

Description.	Machines by the Government.		Machines by contractor.	
	Crowns.		*Crowns.*	
Dredging necessary in connection with item 1 (*a*)	137,500	$27,912	233,750	$47,451
Dredging necessary in connection with item 3	57,100	11,591	97,070	19,705
Dredging necessary in connection with item 4	22,300	4,527	37,910	7,695
Dredging necessary in connection with item 6	58,500	11,874	99,450	20,188
Total	275,400	55,905	468,180	95,039

Plans may be inspected at the office of the maritime board, where specifications, conditions of proposals, blank forms, estimates of cost, etc., may also be purchased at the price of 10 crowns ($2.03) per set. All bids must be made on blanks furnished by the State. Bids will be received until 12 o'clock noon of November 30, 1900. Each bidder is required to deposit 350,000 crowns ($71,050) in cash or Government securities in the imperial subtreasury at Trieste, and this deposit will have to be increased to 700,000 crowns ($142,100) by the successful bidder. The contract will be awarded by the Ministry of Commerce.

FREDK. W. HOSSFELD,
Consul.

TRIESTE, *November 3, 1900.*

STRIKE INSURANCE IN AUSTRIA.

A number of Austrian manufacturers have recently formed an association for insurance against strikes. It is the object of the association to indemnify its several members for all losses sustained by them from unjust strikes which may break out in their respective establishments, whether voluntary, sympathetic, or forced. Each member is to pay a weekly premium equal to from 3 to 4 per cent of the amount of his pay roll. The indemnity to be paid to him in case of a strike is to be, tentatively, 50 per cent of the wages paid to his employees for the week next preceding the suspension of work. It is provided, however, that no indemnity shall be paid if a committee of confidential agents appointed by the association shall, after a full investigation of all the circumstances, find the strike a justifiable one.

It is worthy of note that a report upon and discussion of the subject "Insurance against strikes" forms a prominent feature of the programme of the national convention of Austrian manufacturers to be held this month.

It appears that this movement of industrial employers is not confined to Austria. It is reported that a similar insurance association, though on a smaller scale, has been organized in Leipzig. Both the Austrian and German associations, it appears, recognize in principle the justness of strikes, which is, at least in this country, an important concession to labor. Whether this recognition will have any practical result. remains for the present a matter of conjecture.

FREDK. W. HOSSFELD,

TRIESTE, *October 11, 1900.* *Consul.*

THE PENDING INDUSTRIAL CRISIS IN GERMANY.

Germany is now passing through a period of reflection, self-examination, and a somewhat vague uncertainty as to the future, which involves several points of economic interest to other countries. From about 1891–92 until the summer of the present year, the general course of German industries, and especially the foreign commerce of this country, has been one of rapid and substantial expansion and development. In several leading branches of manufacture, electrical and other machinery, shipbuilding, and general foreign commerce, this activity is still general and unabated; in others, including textile manufactures, hardware, cutlery, cement, and metallic tubing, the limit of profitable production seems to have been reached, if not temporarily overstepped, and this, with the

scarcity and high rate of money incident to liberal investments in all sorts of improvements and new enterprises, brought on the relapse which, during the past three months, has caused a general decline in most industrial securities. This decline has not been restricted to any one branch or class of industries, but has affected more or less the stocks of many establishments of the highest financial responsibility, soundly and ably managed, and which are still working overtime on orders that will consume their entire output for several months to come.

The question which all thoughtful Germans are now seeking to determine is, how deep seated and permanent are the causes of the present depression—whether it is after all anything more than the natural reaction which inevitably follows a protracted period of intense activity, and whether Germany has at command the resources and conditions which will secure continued prosperity when the temporary stoppage in exports to South Africa and China shall have been relieved by the return of peace and the resumption of normal trade with those countries. In other words, has the bottom been already reached, and is the slight recovery which has taken place in most leading securities during the past fortnight a proof that the danger is really past? On this point there are many opinions, and the discussion now going on in the commercial and technical press reaches down and backward to the ultimate foundations of German prosperity.

Among the notable contributions to the debate is a recent article in Stahl und Eisen, the foremost organ of the metal industry, which shows in respect to pig iron that the situation is not so dark as it has been painted. It is shown that the German output of pig iron rose gradually from 4,641,217 tons in 1891 to 8,029,305 tons in 1899, the increase being steady and regular from year to year and not marked by any such colossal and sudden expansion as took place in the United States during 1898–99. The increased German product was not only regularly absorbed at home, but imports of foreign pig iron also increased from year to year. During the first eight months of the current year, the pig-iron output of Germany, including Luxemburg, reached a total of 5,469,014 tons, an increase of only 101,505 tons, or 1.9 per cent, over the product for the corresponding period of the preceding year. At the same time, the imports of foreign pig iron rose to 485,195 tons, against 383,223 tons imported during the first eight months of 1899, while the exports dropped from 125,461 tons to 82,549 tons. This halting in the increase of pig-iron production and consequent diminution of exports while pig-iron imports have continued to increase is attributed solely to a deficiency in the coke supply and is put forward as a proof of the

inherent soundness of the German situation in respect to pig iron and all that it involves. There has been no overproduction, but, on the contrary, an underproduction; so that if any permanent check in pig-iron consumption ensues, there is a margin of about 750,000 tons per annum of imported iron which can be dropped before the German furnaces will need to curtail their output for want of a home market. It is due largely to this demonstration that the stocks of most German furnace companies have recovered several points during the past few days.

Another point in the argument is that the deficit in coke which has restricted the production of pig iron is due, not to any decrease in the supply, but to an inordinate increase in consumption. On the contrary, Germany never mined so much coal or produced so much coke as during the current year. The output of the Westphalia coke syndicate shows an increase ranging from 6.16 to 11.06 per cent for every month from January 1 to September 30, 1900, the totals being 5,715,170 tons for the eight months, against 5,258,194 tons, a net increase of 8.6 per cent over the product of the same months in 1899, which surpassed all previous records. Reviewing all these facts, the writer in Stahl und Eisen rebukes German capitalists for their timid apprehensions, exhorts coal producers and ironmasters to stand together, resist panicky depressions in prices, avoid cutthroat competition, and all will go well.

The present conjuncture is recognized as a crucial test of the real efficiency of syndicates and cartels in resisting the effects of adverse conditions and in showing whether they actually serve, as has been claimed for them, the purpose of "a parachute to enable the victims of overproduction to get safely down to a solid basis." Popular opinion here generally asserts that, while German syndicates have been on the whole conservatively managed and have resisted to some extent the advance of prices during the flush years of prosperity, they have not done this sufficiently, but have yielded unduly to the fascinations of large profits, with the result of attracting excessive capital to certain lines of manufacture and creating overproduction from which the whole country must suffer. Just how far this is true is the main point in dispute; only the future can save and maintain what they have done so much to create.

THE QUESTION OF COAL SUPPLY.

Aside from the local conditions which exist in Germany, by far the most important and ominous element in the problem is the new and enlarged rôle which has been assumed by the United States as a source of coal and metals. The first reports that American coal had found a market in France and Italy and had been even tested

successfully for gas-making purposes in London were received here with incredulity amounting to resentment. The fact was recalled that a trial shipment of American anthracite to Berlin some years ago had proved slaty and inferior, and the reported dissatisfaction of a French railway company with its first trial of American steam coal was dilated upon to show that Germany's already large adverse trade balance with the United States would never be still further increased by imports of coal. So that while dealers and certain consumers hailed the prospect of a new source of supply from beyond the Atlantic, the general sentiment of the press was distinctly hostile and incredulous.

Finally, a test of Ohio coal was made on the Bavarian State railways, with excellent results. The fuel was superior to the best native coal, but at that distance from tide water was naturally too costly to compete. Then the fact was revealed that the great trans-Atlantic German steamship lines use only American coal, and that the *Deutschland*, before setting out to break the speed record of the sea, had filled her bunkers at New York. There was no arguing against a fact like this, and when, a few days ago, the Berliner Rundschau announced that West Virginia gas coal had been tested at Hamburg and found superior to the Cardiff standard, the conclusion became unavoidable that only scarcity of tonnage and exorbitant freights stand between the coal-famine prices in Germany and the exhaustless deposits of the United States.

The farther and more closely the subject is studied, the more difficult it becomes to reconcile the indisputable facts with the theories of those who have sought to prove that the present demand for American coal in Europe is merely casual and likely to be of short duration. Against this hypothesis are the facts that the increase of population, especially in Germany; the substitution of steam, electric, and gas motors—all dependent ultimately upon coal—for horse-power; the rapid growth of cities in which coal, briquettes, and coke are used all but exclusively for domestic heating and cooking purposes; and, finally, the enormous expansion of manufacturing industries to which coal is indispensable, have combined to enlarge the consumption out of all proportion to any practicable increase in coal production. France, for example, produces 21,000,000 tons of coal and consumes 32,000,000 tons, leaving a deficit of 11,000,000 tons, which has heretofore been filled by importations from Great Britain, Belgium, and Germany, none of which countries has now any important surplus to spare. It is not apparent that the output of French coal can be increased to any important degree, so that it is not surprising that in face of such a deficit coal is retailed at

Paris for 68 francs, or more than $11, per ton, with a very short supply and the price still rising.

Hamburg burned, in 1899, 3,065,900 tons of coal, of which 1,645,800 tons came from the Westphalian district and 2,420,000 tons, or far more than half the entire supply, was imported from Great Britain.

Berlin, during the same year, consumed 3,486,245 tons of mineral fuel, classified as follows:

	Tons.
English coal, coke, and briquettes	267,155
Westphalian coal, coke, and briquettes	299,065
Saxon coal, coke, and briquettes	4,181
Upper Silesian coal, coke, and briquettes	1,530,148
Lower Silesian coal, coke, and briquettes	328,360
Bohemian brown coal and briquettes	93,783
Thuringian brown coal and briquettes	963,553

Thus the requirements of two German cities, both remote from the nearest coal field and wholly dependent upon purchases in the open market, amount to more than 6,500,000 tons per annum. Both cities are easily accessible by water to American coal—Hamburg with its open port and ample coal docks, Berlin with a river freight of only 75 cents per ton in addition to the ocean rate—and both cities are now facing the setting in of winter with meager supplies and are resentfully paying prices from two and a half to three times higher than those of two and three years ago. The great coal syndicates that control the German supply have slightly increased their output, but this increase has been absorbed by iron works and other consumers in the immediate neighborhood of the mines; so that but a meager surplus is left for the great cities in which, as in Berlin, the population is increasing more rapidly than houses can be built to shelter it.

It is difficult, in presence of facts like these, to doubt that there is in western Europe, as well as in Russia—where consumption has outgrown any present or immediate native supply—a definite and substantial demand for imported coal, nor that this demand, if met as it should be by American exporters, will prove large, profitable, and permanent.

IMPENDING FISCAL LEGISLATION.

It is beyond question that something of the recent depression in German industrial securities—a depression which, in many cases, is out of all proportion to the standing, present prosperity, and dividend-paying power of the companies—is due to uncertainty as to the result of legislation which will begin in the Reichstag a few weeks hence on the future fiscal policy of the Empire. The scope

of this legislation will include a complete revision and recasting of the import tariff and reenactment or rejection of the commercial treaties which were adopted during the period of Chancellor Caprivi, and will mostly expire by limitation at the close of the year 1902. These treaties were reciprocal, granting certain privileges to the imports of the countries concerned in return for equivalent advantages conceded by the same countries to imports from Germany. The general effect of the treaties has been to powerfully promote and hasten the transformation of Germany from an agricultural to an industrial and exporting nation.

But the treaties, while of vital importance to industry and commerce, could not in the nature of the case afford equal protection to agriculture, which, for reasons inherent in the economy of modern husbandry, has languished until practically the whole body of German farmers and landowners are united in a dominant political party which claims as a measure of justice that the commercial treaties shall be abandoned and that the import duties on grains and other food products shall be so advanced as to cut off the present flood of imports, and, by increasing the home-market price of food, rescue German agriculture from its present difficulties. It is claimed by the Agrarian statesmen that the industrial and commercial classes have enjoyed a long, fertile season of prosperity, and that it is now their turn to be similarly favored. But every intelligent economist knows that dearer food means increased cost of industrial production, which, in face of certain natural conditions—the necessity of large imports of cotton, wood, copper, and other raw materials—will seriously weaken the Fatherland for future competition with highly favored nations like the United States. This is the kernel of the problem, the element of uncertainty in the future which, far more than any present overproduction or stagnation in trade, depresses the securities of companies that will pay 15 to 25 per cent dividends in December and are working upon orders that will tax their full capacity far into the coming year.

The new tariff act has been elaborately prepared and digested by experts who represent every department of German trade and industry, and who have made a faithful effort to harmonize conflicting interests on an equitable and scientific basis. Indications point to a general advance of duties on most manufactured products which Germany can now produce at home, and these changes, unless modified by concessions under reciprocal treaties, will exert an important influence upon the future trade relations between the Empire and other exporting countries.

FRANK H. MASON,
Consul-General.

BERLIN, *October 26, 1900.*

A GERMAN VIEW OF UNITED STATES DEVELOPMENT.

The German central bureau for the preparation of commercial treaties has just published a book written by its president, Dr. Vosberg-Rekow, who, as a German delegate, attended our last year's Philadelphia industrial exposition and spent months in investigating the industrial conditions in the United States. This book is remarkable for the candor and ability with which Dr. Rekow handles his important theme, "The Commercial Treaties of 1903," in the treatment of which he reviews the economic conditions of the great industrial powers and their relations toward each other as competitors. He devotes much attention to Russia, which he considers not only as a most valuable market for industrial products, but also from the broader base of a future source of supply of raw materials (cotton, petroleum, metals, etc.), instead of the United States, which latter, the doctor declares, to be the most dangerous opponent to Germany's industrial power and commercial advance. Dr. Rekow says that there are but three great world powers—Great Britain, Russia, and the United States. After discussing Germany's position toward the two first named in her struggles for industrial and commercial advancement, he says, regarding the United States:

I now come to the last and, as I opine, the most powerful rival to our economic future. I mean the United States. It has, as far as its strength and characteristics are concerned, very little in common with any other nation, including the other two world powers. The Union forms a great economic realm which possesses inherently all organic conditions for economic activity and prosperity, and is sufficiently developed to plentifully feed its population, which latter is ample in numbers and in culture to make its bountiful resources available.

While Great Britain, with her colonies, likewise possesses all supply sources for human needs, the territories are not generally developed; neither do they form a compact entirety.

In proof, note the East Indian famine; a condition that could not possibly exist in the United States.

Viewed from an economical standpoint, Great Britain does not even appear as a unit, for this reason: Divergent trade policies exist in the different parts of the Empire which lack a strong centralized will to give unified action. Russia is as yet in an embryo condition. Her mineral resources are awaiting exploitation; those of the United States are already well developed, though far from becoming exhausted. The trans-Caspian cotton cultivation, now in its infancy, is retarded in its efforts to gain a market by the high cost of production and lack of transportation facilities, whereas American cotton is a permanent and potent factor in the world market.

While the great mass of Russia's population remains in a comatose state and

occasionally starves (but a small part of it participating in modern economic work), the entire Yankee nation is like a perfectly disciplined army standing shoulder to shoulder at the forge, the loom, or the printing press, earning wealth from their industry.

Rarely, if ever, will there be met, in connection with natural riches like those of the United States, a people like the Americans. No aborigines are fettered by habits inimical to progress. There is a restless tide of immigrants; a population always alert, eager for conquest, without hesitation or scruples. These immigrants are by no means the worst of the population the Old World could spare; on the contrary, some of her cleverest and best children are among them. True, very few have high refinement, but all possess a certain amount of world knowledge, and even the most uncultured of them are endowed with adaptability to cope with life's vicissitudes.

The influence going out from such a people can not be otherwise than powerful in a high degree. Scarcely has this immense country been brought under cultivation but its influence is felt across the oceans. Europe, with her old-established industries, is so hard pushed by the young American competition that the necessity of uniting in a common customs league against the bold intruder has become a matter of serious consideration. Many European lines of manufacture—and by no means the least important—have severely suffered and are still suffering. And while Europe year after year takes more goods from the United States, the latter's imports from Europe diminish more and more.

The United States has covered Europe with a network of consulates and makes its consuls at the same time inspectors of our exports and vigilant sentinels, who spy out every trade opening or advantage and promptly report it.

After the Americans had established their supremacy as exporters of agricultural products, which export they have organized in such a masterly manner as to defy all competition, they immediately turned to exportation of industrial products, not of the finest quality, but carefully finished; and, by means of wholesale production, put at so low a price that they will in a very little while conquer the world markets.

Against this industrial invasion, our customs imposts will avail as little as our grain imposts have done. Very meager chances remain for us; one of these is that we and England retain in our hands the ocean-transportation business, which, to a certain degree, influences imports.

But the dread struggle will have to be met; the longer it is postponed the harder it will become for us. Last year, we imported from the United States to the value of 907,200,000 marks and exported thereto 377,600,000 marks. It is my opinion that this ratio will not vary much in the future.

However, these figures denote no danger to us; we import mainly American raw materials, which are indispensable to us, and their increasing volume is the best proof of our industrial advancement. Our chief danger lies in the probable eventuality that America's wholesale production of manufactured articles will drive us out of the foreign markets by underbidding us in price. In short, the Americans are the sole commercial-political opponents whom we must earnestly dread. Russia will remain a profitable customer to us in the future; with Great Britain, we are united by bonds of common interests; the United States is—in an economical sense—our enemy. What must we do in order to keep Russia tributary to us, to maintain the status quo with England, and to successfully fight America?

Dr. Vosberg-Rekow then at length advocates a close trade union with Russia, expatiating on the great natural riches of that vast

Empire and Germany's favorable chances of exploiting them. He notes the danger to trade in Russian Asia from the developing Pacific traffic of the United States, and continues:

The fear of the American industrial invasion should lead us and all European countries to a close union with Russia, which country, with its newly acquired territories in Asia, could reimburse our export trade for the loss of the American and other foreign markets, and, in addition, furnish us with the indispensable raw materials.

Russian petroleum and trans-Caspian cotton may be made substitutes for the American staples, and, while Russia might not altogether replace the United States as a source of supply of raw product, we should strive to become independent of the Americans and teach them that a change of policy towards us is requisite.

The United States, reliant on her economic strength, has hitherto maintained an independent—even autonomous—trade policy, altogether according to her own interests, regardless of diplomatic remonstrances and paper protests. A European defensive customs union against the United States has been proposed; but its adoption is not to be thought of at present. But, in renovating its trade treaties, Germany must endeavor to obtain a remedy. Our agrarians attempted to check American assumption by a prohibition against American meat. This action was futile, unpractical, and unjust. The meat inspection in the United States is as good as possible. A law prohibiting its importation was not justifiable; it was pharisaical to maintain that sanitary reasons determined this action. It would have been better to have courageously stated the facts.

When we have once secured our base by means of treaties with Russia and other countries, we can denounce the most-favored-nation clause with America, and follow up this step with other measures; but I would distinctly repeat that such action is frivolous, unless we have support. I do not believe in a tariff war with the United States. Uncle Sam is not likely to provoke one, because he is too sensible a business man to risk losing such a good customer as we are for his cotton, copper, petroleum, etc.; nor has he a large merchant marine to allow him to dispense with the help of German vessels, which carry his freights to all parts of the world. This is a chance in our favor now, but there can be no doubt that an American merchant marine will ere long be forthcoming and become of vast extent. Whoever has watched the present state of activity in American shipyards will have no doubt on that score. If we now take the right steps, the United States can be induced to conclude a commercial treaty with us that will answer better for our industrial interests than the present one.

Germany's industrial advancement is principally due to the thoroughness of her technical education. It is strengthened by the continuous substituting of machinery and machine tools for hand labor. Still, in this respect the English industry in some branches is ahead of us. It is worthy of note that in this evolution, too, the United States has the foremost place and has made gigantic strides, not only in applying machine tools, but in inventing and manufacturing them; so that to-day she supplies us. This signalizes in an extraordinary degree American intelligence. Thus, the Americans—though wanting our superior technical education—thanks to their practical eye, improve upon our methods and apparatus. Theirs is rather the activity of an experimentalist than that of a trained craftsman, but a clever faiseur, if he but have assurance and luck, may distance the educated master. The Americans have no thorough education; nor do they possess a modern industrial system as we Europeans understand the terms. The American applies himself to a single branch or to a specialty, with utter disregard of European methods and their results;

he devotes to his work an amount of energy which stupifies Europeans, and, for a while, he succeeds in driving us out of the line of articles on which he has centered his energy. Against such peculiar activity a general trade policy is quite ineffectual; we must put ourselves in condition to counteract this artificially forced growth of specialized industry.

SIMON W. HANAUER,
Vice-Consul-General.

FRANKFORT, *October 13, 1900.*

THE AGRARIANS AND THE NEW GERMAN TARIFF.

According to an article in the Deutsche Wein-Zeitung, it would appear that agrarian influence had been at work in the preparation of the new German import tariff, in order to revoke the advantages conceded to foreign grapes and wines for blending purposes, which exist under the commercial conventions of 1892, and, ultimately, to even raise the import duty on wines. It seems most likely that, in a measure at least, the Government will accede to the agrarian demands for protection, notwithstanding the fact that the production of wines in Germany does not cover the consumption. I quote as follows:

It seems to be the impression of the wine growers, especially the smaller ones, that a protective tariff would increase the value of their wines. They forget, however, that in the wine trade other factors come into play in establishing prices, and the highest possible duty will not tend to increase the price of poor wine. The medium and better grades of German wines fitly command high prices, entirely independent of any foreign wines, owing to the character and flavor peculiar to the German products, which is in no way equaled by wines of any other country. For the inferior grades of German wines, however, and especially for the inferior red wines, foreign wines for blending are absolutely indispensable.

The Hamburg Chamber of Commerce says:

The importance of the agricultural interests must not be overlooked, and if tariff protection is necessary for the latter, it should be accorded. But, in the first place, it is necessary to find out whether after all the unfavorable condition of the German farmer is general, and whether it is not due to such factors as lack of working capital, lack of knowledge and proper management, extravagance, etc., rather than to unremunerative prices for his products. Whether the German farmer would be benefited by a high tariff on grain is very doubtful, as, in the first place, Germany is not in a position to produce nearly enough grain to meet the demand, and with the growing population the imports of grain must necessarily increase. A high tariff on grain would increase its price and thereby enhance the cost of living to the laboring class. In the face of this, a high duty on grain would seem unwarrantable, for even though the farmer might be temporarily the gainer thereby, the laboring classes of all other industries, which are by far the most important, would suffer, owing to the increased cost of living.

It would seem more proper to assist the German farmer by doing away with the

import duty on feed stuffs and fertilizers, his chief requirements for production, rather than by increasing the duty on his products.

Whether the German Government will take this view of the matter is very doubtful, and in all probability the import duty on grain, wine, and grapes will be raised.

WALTER SCHUMANN,

MAINZ, *October 4, 1900.* *Consul.*

CONDITION OF LABOR AND MANUFACTURE IN GERMANY.

In regard to the present condition of German industries, I send the following translation of an article which appeared in the Ostdeutsche Presse under date of August 30, 1900:

The remarkable development of industries which has been so pronounced in a few nations for some years past seems to be reaching a climax. This is especially the case in textiles. Foreign markets in textiles have diminished, while home consumption has been proportionately reduced. Many establishments have reduced their output, which means that laborers have been dismissed. In many districts, the unemployed are moving away, houses are empty, and stores where laborers were in the habit of buying are in tight circumstances. A general distress among textile workers is everywhere apparent. The wages of a weaver in good times are seldom more than 12 marks ($2.85) per week. To-day in many districts he is earning only 8½ marks ($2.10). How a man can provide honestly for a family, pay rent, taxes, and debts from this amount is incomprehensible. Especially is this the case since daily necessities, rent, and coal have become so much dearer.

Among the spinners, conditions are no better than among the weavers. Numerous spinners have been dismissed, hours have been shortened and wages reduced. The output of worsteds has been reduced one-third. Not only is this the case in Germany, but in other countries as well. Many old firms will be compelled to close down entirely unless a change for the better sets in shortly. In the dress-trimming industry, everything is at a standstill. Throughout the Erzgebirge laborers are seeking employment in the mines.

The high price of coal and the coal famine generally is making itself felt in every branch of industry where this mineral is needed. It is not surprising to read of numerous laborers being dismissed from the iron and steel foundries. To be sure, those iron and steel industries which are employed by the merchant marine and the newly planned navy have plenty to do and are reaping a golden harvest.

Without question, we have reached a turning point in our industrial development. Ominous clouds which foretell no good are rising over all the great industrial states of Europe.

What is the cause of the present crisis in German industrial circles? One year ago the war in South Africa began, which not only put an end to German exports to that part of the world, but cut off the import of gold from the Transvaal at the same time. Money became scarce and the rate of interest high. Germany has several billion dollars invested in foreign countries which is not bringing in the expected returns. German industries during the past few years

have been multiplying rapidly. There has always been plenty of money in the country, but the need is now greater than the amount at hand. Many small merchants, shopkeepers, etc., in order to get rich in a hurry, invested their savings in "wild-cat" enterprises. Government securities have sunk in value, while money for new undertakings can only be obtained at high interest.

The coal strikes early last spring led to such high prices for fuel that many factories were closed down. The scarcity of coal caused much distress among the poor people last winter, which was an exceptionally severe one. The price of coal to-day is 25 per cent more than it was one year ago and bids fair to go even higher. Inasmuch as one-half of the population of the Empire felt the rise in coal at once, they were compelled to cut down expenses in other things. The effect of this was noted in many industries. Again, the high price of coal increased proportionately the price of production, and this became especially noticeable in foreign countries where German products were compelled to compete with the products of other nations. In addition to this, the present troubles in China do not promise to mend matters.

The real secret, however, of the present stagnation in many branches of German industries is this: German foreign markets have not increased proportionately with the increase of home production. During the past year, German exports to China and South Africa have practically ceased. The Empire's exports to the United States, England, the Orient, South America, and the Balkan States have been on the increase; but these markets have fallen far short of consuming all that German manufacturers have produced. Then, the most powerful factor with which German industries have had to contend has been the development of independent industries in those countries where Germany has always had her best markets. Especially has this been the case in the United States with all textile products. For example, the following statement will show how the exports in woolen goods from Greiz to the United States have fallen off:

1895	$1,008,390
1896	571,567
1897	422,048
1898	217,863
1899	48,842

Without question, the competition of the German laborer is not as prosperous as it was a few years ago. The number of idle workmen is increasing, and hard-earned savings must be used. How long present conditions will last remains to be seen.

JNO. F. WINTER,
Consul.

ANNABERG, *October 17, 1900.*

THE TRAFFIC IN GEESE AT BERLIN.

The domestic goose holds about the same honored place in the nutritive economy of Germany that the more delicately flavored and patrician turkey does in that of the United States. It is the standard luxury of the German people, and during nine months of the year forms the principal feature of the table at festive as well as every-day entertainments.

Although every German village has its flock of geese, and notwithstanding the great numbers that are bred and fattended at farms along the banks of rivers, ponds, and small lakes, the home-grown supply falls far short of the constant demand, leaving a large annual deficit to be filled by importations, which come mainly from Russia. The season for this traffic is now at its highest, and the receipts of Russian geese at the Rummelsburg station, in the southeastern quarter of Berlin, average about 15,000 daily. A special goose train of from fifteen cars on ordinary days to thirty-five or forty on Mondays brings the birds from the Russian frontier. The cars are specially built and rigged for this service and carry each about 1,200 geese.

Immediately after arrival, the whole train load is inspected by a corps of sanitary officials. The fat ones are then distributed among the dealers and marketmen, while the others—and these include the vast majority—are sent to be fattened at farms and feeding establishments in the outlying provinces.

The inspection is exceedingly rigid. If a single goose dies en route or is found sick with any disease that can be communicated to others, the whole carload is placed in quarantine for a period of eight days. Should another goose die during this period, the whole lot is kept in quarantine eight days longer at a cost of about 2,000 marks ($476), whereby the loss of the owner becomes so enormous that he is driven to the most extreme care and precaution in all future operations of the same kind. This is the real object of the system—to make the penalty of introducing diseased birds so severe as to render such practice ruinous to the perpetrators.

In certain cases, where the evidence of neglect or infectious disease is not conclusive, the lot is taken to the city abattoir and killed under supervision of the sanitary police, after which such as are found to be free from disease are released for sale at a special auction held in the central market hall, whence the trade name "auction geese," which applies to those which have been slaughtered under police supervision. Those which show no trace of disease, but have been unavoidably injured in transit and are otherwise in

good condition, are called "Bracken" and are sold to certain dealers who retail them for reduced prices at a special market beside the great market place, where the poorest and most frugal Berliner can find something adapted to his purse.

The aggregate wholesale traffic in geese at Berlin amounts annually to nearly $2,000,000. To the ordinary observer, all geese are very much alike; but the expert dealers here divide the Russian birds into twenty-one different breeds and categories, which now command in the Berlin market, according to species, age, size, and condition, wholesale prices varying from 43 to 60 cents each, though the prices advance with those of other poultry as the season lengthens from autumn into winter, the great climax of the trade being just before and during the Christmas holidays, when goose in every form, from the plain "Gänsebraten" of the laboring classes to the paté de foie gras of the epicure, dominates the tables of the festive season.

FRANK H. MASON,
Consul-General.

BERLIN, *October 18, 1900.*

FLAX MARKET IN GERMANY.

Flax or linen yarns were comparatively cheap in the continental and British markets up to October, 1899, but that month brought a sudden change. Spinners asked an advance for their products of 10 to 15 per cent, which was readily paid by yarn dealers and manufacturers of linens. Since then, yarns have advanced from 20 to 65 per cent. This is chiefly due to an unfavorable season in the flax-producing provinces of Russia, on which continental and British spinners are almost entirely dependent. The season of 1900 is no better, and it is possible that flax yarns may advance another 10 per cent over present quotations, should European spinners not find cheaper raw flax elsewhere.

German spinners are eagerly looking towards American flax markets in this emergency. Ten years ago, American flax was first offered in Germany by a Chicago merchant. The German spinners found the quality fair for coarser yarns, but the flax was not marketable, because it was offered in bales in which the fiber was crumpled into all shapes; in other words, it was so badly tangled that it could not be used profitably.

All raw flax sold in continental markets is put up in bales weighing from 75 to 150 kilograms (165 to 330 pounds). These bales are carefully wrapped in jute bagging, so that the flax fiber is not damaged by transport. The bales are further made up of a great number of small bundles of flax fiber, so arranged that the fiber can not

be tangled or mixed in any way whatever, the weight of such a bundle being about 2 pounds.

The term "raw flax" is applied in Germany to the flax fiber as it comes from the roasting and the hackle, no other process of manufacture having been applied thereto.

I would gladly receive samples of American flax, and think I could furnish American producers a ready market in this part of Germany, provided the flax can compete with that produced elsewhere in price and quality.

Other information will be gladly furnished to anyone in the United States who may be interested. The Zittau consular district is a linen-producing section.

I forward to the Department samples of raw flax * sold in continental and British markets.

WILLIAM K. HERZOG,

ZITTAU, *October 19, 1900.* *Consul.*

GERMAN COTTON-TEXTILE INDUSTRIES.

Over one million spinners and weavers find occupation in Germany, and the export trade from this Empire would be relatively small were it not for its textile industries.

In the Rhineland and Westphalia, there were 717,000 spindles in the cotton mills in 1888, and these more than doubled in 1897, when the number was 1,636,000. These mills consumed, in 1885, over 22,500,000 pounds of raw cotton, and in 1897, 47,000,000 pounds. In the woolen industry, Germany had, in 1888, 635,000 spindles in carded woolen mills, while in 1897 there were 1,850,000 spindles. The only record of depression is shown in this branch of textiles, where the earnings which in 1888 amounted to 10 per cent on the capital invested subsequently reached 16 per cent and afterwards declined to 3 per cent. In 1891, there was a loss of 1 per cent on the capital, followed a few years later, however, by earnings amounting to 9 per cent. Again, in 1897, there was another depression, resulting in positive loss to the mills. Owing to the feverish condition of German manufactures of late years, the production of textiles has been rushed; but the market for home and export has not increased in proportion. Within the last twelve months, an arrangement was made among the large producers whereby the output was decreased 20 per cent.

OLIVER J. D. HUGHES,

COBURG, *October 18, 1900.* *Consul.*

* Filed for reference in the Bureau of Foreign Commerce, where they may be examined by interested parties.

BRITISH IMPROVEMENTS IN KNITTING MACHINES.

Among numerous improvements in knitting machines which have reached the practical stage, but have hardly attracted the attention even on this side which their merit seems to warrant and are practically unknown upon the other side, are the "Maximum" knitting machine and the Bettney improved splicing mechanism.

THE MAXIMUM.

The Maximum knitting machine originated in the idea of producing as many fashioned shirts and pants as can be made in cut work off the circular frame. It is a vertical latch-needle straight-bar frame, in six divisions or more, for producing fashioned shirts and pants. The article produced is selvaged, same as a patent, and not a circular-fashioned article, and requires to be seamed on the "Kochler" or some other seaming machine, or can be seamed by hand, if required.

The article to be made is commenced on its narrowest width when desired to fashion, the fashioning "clawker" is thrown in while the machine is running, and it commences to raise fresh needles into work on either side, by every 2, 4, 6, 8, 10, or 12 courses or more, according to the shape required.

On the fashioning clawker being lifted (while the frame is still running), the frame continues making straight work on the width arrived at. This straight work can be carried on as long as desired and the widening recommenced as required, till any width up to the full width of the division is reached.

Splicing can be applied anywhere and to any part simply by dropping a lever. The frame runs at 45 to 50 traverses a minute on its full width—say 32 inches—and, having two cam boxes to each division, makes 90 to 100 courses a minute. This, it will be seen, doubles the production of the old machine, provided the latter should go as fast.

The great feature of this frame is that the cams traverse only the actual width of the fabric being knitted. Thus, if working on 16 inches, the traverse is only 16 inches, and on every widening that takes place the traverse is automatically increased; when not fashioning, the traverse does not increase. By this means, another 33 per cent is claimed to be added to the production over and above the speed already quoted. In addition to this, there is an overhead variable drive, which, as the fabric is widened, automatically slows

down till the full width of the division is attained. By this means, the inch speed is maintained throughout.

On 16 inches, the speed is double that of the speed on 32 inches, the result being that as many superficial feet of fabric are produced on the 16-inch width as on the 32-inch width; or as many pounds of yarn can be worked up in a day on a narrow width as on the full width, thus giving a further increase of, say, 25 per cent over the production previously mentioned.

The goods produced are practically equal to Cottons patent work. The Maximum machine is unique in the following respects:

(1) It traverses only the actual distance being knitted.

(2) It produces as much fabric off a narrow width as off a wider width.

(3) It produces a quantity of fashioned spliced goods equal to the production of the cut circulars, and there is no waste in cutting out.

After arriving at the desired width, the three actions—the expanding traverse, the decreasing speed, the extra needles brought into work by widening—being all geared up together, are wound back by the operator by the turn of a wheel to the width it is desired to begin on. Thus the traverse is reduced, the speed increased accordingly, and the extra needles brought into work by fashioning are thrown out of work.

When the fabric attains its full width, unless the fashioning lever is raised—thus making straight work—the machine will stop automatically, so as to prevent overfashioning.

Six machines have been in operation here for six months or so, and considerable quantities of goods have been placed on English and colonial markets. Patents have been taken out here, in Germany, France, Canada, and the United States; and the latter, I believe, are for sale. The company's address is the Maximum Knitted Underwear Company, Thoroton street, Nottingham.

THE BETTNEY SPLICING MECHANISM.

This improvement was invented by H. A. Bettney and is now represented by C. W. Hammersley, Brougham Chambers, Wheeler Gate, Nottingham. It has been in practical use for about a year and is built by Messrs. Blackburn & Sons, of this city, under a royalty. American rights are still unsold.

The invention consists of an improved splicing mechanism applicable to circular bearded needle knitting machines of the kind often known as web heads and making a web which is largely used for vests and pants (undershirts and drawers). To each feeder on the head, a splicing mechanism is applied. This comprises a bladed

wheel with blades specially cut to insure the thread being thrown in and out of action at particular needles. There is also a thread cutter and a holder for securing the cut ends of the thread. The splicing thread is thrown into and out of work by a cam on the needle cylinder, this cam being arranged according to the number of needles upon which the work is to be spliced, and also according to the number of feeders, while the number of courses spliced is controlled by a single-pattern-cam mechanism.

The improved mechanism can be applied to machines fitted with two or more feeders, and is also applicable to existing machines, this being a great advantage over most other splicing machanisms, which are adaptable to one feeder only. Many hosiery manufacturers have had the improved mechanism fitted to their machines, and are fully satisfied with the accuracy of its work and the speed at which the machine can be run.

S. C. McFARLAND,

NOTTINGHAM, *October 30, 1900.* *Consul.*

MANCHESTER EXPORTS TO THE UNITED STATES.

Under date of October 13, 1900, Consul Grinnell sends from Manchester tables of the exports of cotton yarn and cotton velvets, cords, and fustians from this district to the United States for the quarter ended September 30, 1900, as follows:

Cotton velvets, cords, and fustians exported to the United States during the quarter ended September 30, 1900, compared with the corresponding quarter of 1899.

Month.	1900.	1899.
July:	*Yards.*	*Yards.*
Dyed	725,950	
Undyed (gray)	722,320½	
Total	1,448,270½	1,066,555½
August:		
Dyed	800,911¼	
Undyed (gray)	826,590½	
Total	1,627,501¾	1,326,544½
September:		
Dyed	635,396¾	
Undyed (gray)	574,704¼	
Total	1,210,101½	1,029,880½
Grand total	4,285,873¾	3,422,980½

Exports of cotton yarn to the United States during the quarter ended September 30, 1900, compared with the corresponding months of 1899.

Month.	1900.	1899.
	Pounds.	*Pounds.*
July	284,360¼	196,253
August	257,220	179,973½
September	201,819⅛	209,139
Total	743,399⅜	585,365½

BRITISH TESTS OF UNITED STATES GUNS.

It happened recently that in a shipment of American double breech-loading shotguns every one offered for Birmingham proof-house test either burst or bulged. The explanation is that there are legal requirements here which the American manufacturers of double-barreled shotguns are not complying with. It should be distinctly understood that the unfortunate results do not reflect on the quality of these American guns; and also that there is no intentionally protective discrimination here against the American gun.

It is a legal requirement that guns, before they are sold or used in Great Britain, shall have withstood two prescribed tests of strength. As will be explained further along, this affects our double shotguns only. The British maker, before putting shotgun barrels together, sends them to the proof house, where they are subjected to a very severe explosive test, and if they withstand this the maker may feel assured his material is all right; each barrel having received the proof-house mark to indicate that it has withstood the preliminary (called "provisional") or severer test. When gun barrels have been finished and the action attached (of course, in the finishing process the size of each barrel has been lessened and its strength reduced correspondingly), a final test is made which is not so severe as the first, and each barrel and the action then receive the final or "definitive" proof-house mark, which enables the manufacturer to sell the arm and the purchaser to use it anywhere in Great Britain.

German and Belgian proof-house marks are accepted in England, so that guns manufactured in those countries are salable in Great Britain without further test, so long as they bear no name or mark which might lead a purchaser to suppose they were of English make. In the United States, there are no corresponding legal test requirements, and the result is that guns shipped to this country in their finished, and therefore weakened, state must receive, in accordance with the law, the severe primary test as well as the final test.

American rifle, pistol, and many single breech-loading shotgun barrels, even in the finished state, are still so strong they pass the great ordeal; but it is almost impossible for any finished double-shotgun barrel of ordinary weight, wherever made, to stand the primary test which must be given here.

If American guns are to be sold here, the unfinished tubes should be sent here for the provisional test and returned to America for finishing; and at any time afterwards the guns can receive, as do the British guns, the final and easier test and get the proof marks. A great many English gun barrels in unfinished shape are sent to the United States, and American manufacturers buying such barrels should see that they have the British proof-house provisional mark, and this mark would additionally be valuable, if the gun is afterwards exported, in making proof before the United States Treasury officials to obtain the 99 per cent rebate of the duty paid when imported.

A difficulty in establishing governmental American gun-proof tests would be the necessity, on account of the great size of the United States, of having many proof houses, for even with north, south, east, and west stations, gun manufacturers would still be at heavy expense in shipping guns for test our long distances.

The charges in Birmingham for making the test are 2½d. (5 cents) for provisional proof, and from 4½d. to 8d. (9 to 16 cents) for definitive proof, per barrel. It is less costly to have the proof made at the Birmingham proof house than at the London house, because the Birmingham proof-house acts come under comparatively recent legislation; profit is not an object, and as an encouragement to the great gun industries of the district a minimum fee is always charged; while in London, the proof house is under the control of the great gunmakers' guild, which has, like many other guilds, ancient rights, with which Parliament has not seen fit to interfere, and the maximum fee is charged.

Inclosed I send enlarged impressions of the provisional and definitive marks of both the London and Birmingham proof houses.*

MARSHAL HALSTEAD,

BIRMINGHAM, *October 11, 1900.* *Consul.*

* Filed for reference in the Bureau of Foreign Commerce.

REBUILDING A STEAMER ON THE TYNE.

Vice-Consul Nixon sends from Newcastle-on-Tyne, September 6, 1900, copy of a printed description of the rebuilding of a steamer on the Tyne, from which the following extracts are taken:

AN ACHIEVEMENT FOR THE TYNE.

To demolish a house and rebuild it is no uncommon accomplishment. But to pull a big steamer in pieces, and reconstruct her upon the same site, so to speak, is quite another thing. But that is just what has been done by the Wallsend Slipway and Engineering Company with the fine Italian passenger steamer *Savoia*. They have cut her in two, added 70 feet to her length, stripped her practically from stem to stern, put new decks into her, and, more than all, have remade her afterend to inclose the shafting of her twin screws, which formerly were bracketed to the stern frame. They have so transformed the vessel her own parents, the builders, would not know her if they should meet her crossing the sea. The bisection and lengthening of a steamship is not, of course, new; but in the renovation of the afterpart of the vessel are features that are quite unprecedented in ship repairing.

The *Savoia* was built at Genoa in 1897 and is owned by the Veloce Company, her voyages being made to and from the River Plata with passengers and mails. She was originally 372 feet long and carried 78 first-class passengers, 40 in the second class, and 776 in the third class; and her cargo-carrying capacity was only 700 tons. She leaves the slipway 70 feet longer, with accommodation for 130 passengers in the first class, 74 in the second class, and 656 in the third class, the increase being chiefly in the superlative accommodation; while her tonnage has been increased to 2,200—more than three times greater than before. The reason for the alteration was that the vessel was unable to meet the increasing demands upon the cargo and passenger accommodation.

The mere lengthening of the vessel by 70 feet is not very extraordinary, but the necessity of strengthening the structure for nearly the whole length at the gunwale decks and bilges has made the task extremely difficult. This extra strengthening consisted of entirely removing the upper strakes of topside plating and replacing them with much heavier material, besides doubling the stringer plates at the level of each of the decks. The bilge of the vessel was stiffened considerably by doubling the bilge plating and efficiently strengthening the butts of other plating in the vicinity. A new bilge keel was also fitted to the vessel, which will have the effect of making her a much steadier sea boat. From time to time, as the work proceeded, other large alterations were added to the original contract, including a large, deep tank for the purpose of carrying fresh water at the fore end of the vessel and a complete steel lower deck in the midship length for the accommodation of emigrants.

But the alteration of special importance is at the afterend of the vessel. The stern gear, consisting of the propeller and outer tail shaft, were originally supported in two cast-steel brackets forming part of the stern frame. This system, which is now considered obsolete in modern twin-screw steamers, has been done away with. To accomplish this, the cast-steel brackets were cut away from the stern post and two new cast-steel brackets of entirely different design were fitted in their place. From this outer bracket the ship has then been built out by cutting away the vessel and scarphing the various frames from this point to the point where the shafts originally emerged from the vessel, and covering the whole in with suitable plating. The

former stern tubes were then removed, and two new stern tubes of considerable length were fitted through this bossed-out portion of the ship, to carry the outer tail-end shafts; the inner stern tubes being now, of course, done away with. The tail shafts, which were found to be considerably corroded, were renewed of special Whitworth steel.

The vessel's trials over the measured mile were most satisfactory. Her speed came out at 17 knots an hour, her engines making 92 revolutions in the minute, and her indicated horsepower being 7,000, with 180 pounds of steam pressure per square inch in the boilers.

NEW DREDGER BUILT IN GREAT BRITAIN.

Vice-Consul Nixon sends from Newcastle-on-Tyne, October 16, 1900, the following description, taken from a local newspaper, of the trial trip of a new suction dredger, built on the Tyne on an American system:

TRIAL TRIP OF A NEW SUCTION DREDGER.

Yesterday, the trial trip took place on the River Tyne of the new suction dredger *Hercules*, which was built at the Low Walker shipyard of Messrs. Armstrong, Whitworth & Co., to the order of Mr. Lindon W. Bates, the designer, for the government of Queensland, Australia. The *Hercules* is quite a different type of dredger to the "bucket" dredger. They have nothing in common, except that in their different spheres of usefulness their purpose is the same—that of keeping rivers in a navigable condition.

The vessel can not be described as a handsome-looking boat. It is short and thick, and the proportionately high bows and low-lying stern and wide, towering funnel, and the queer-looking discharge pipe which projects from the stern, and the long side trail, which clings to her water line when not in use, all combine to give the vessel a strange, if not exactly an unprepossessing, appearance. But it is certainly substantial in every sense of the word, and warranted to stand any amount of wear and tear.

In more ways than one the *Hercules* is a remarkable craft. So far as this country is concerned, it is indeed a novelty, for it is only the third of its kind that has been constructed in an English shipyard. Both its predecessors were much smaller and less powerful dredgers. They were both designed by Mr. Bates, and were also the output of the Walker shipyard. The first one left the Tyne in May last for Calcutta, and the second left last month for Rockhampton, Australia, the latter being an Australian government order. These boats, including the *Hercules*, have all been constructed on an American system and are technically known as hydraulic dredgers, their use being to make and keep clear navigable channels in harbors and rivers, which are in constant danger of being silted up with sand or mud. The task for which the *Hercules* has been specially built is the important one of converting what is now a 20-foot channel into a 27-foot channel between the sea and the flourishing city of Brisbane, a distance of over 20 miles, and of maintaining the channel at that depth. In this work, the *Hercules* will be assisted by a still larger vessel of the same design, namely, the *Samson*, which is at present in course of construction at Messrs. Armstrong, Whitworth & Co.'s yard.

The *Hercules*, internally, is a most ingenious arrangement of mechanism and devices for dredging purposes. In the forepart of the vessel there are two large suction pipes, which pass through the bottom of the ship. These pipes can be

lowered to any depth desired and can as easily be raised. On the end of each there is fixed a rotating vertical cutter, a clever device for cutting into and loosening the sand or whatever material upon which the dredger may be at work. These cutters are operated each by a 250-horsepower compound engine, and as they loosen the sand or mud, as the case may be, it is drawn into the suction pipes by a powerful centrifugal pump, driven by an engine of 1,500 horsepower.

After being sucked up in this fashion, the dredged material passes through a pipe running the length of the ship and is discharged through a discharge pipe projecting from the stern. By this means, and by the attachment of additional lengths of pipe, connected by patent joints and floated on a pontoon, which may be deflected by utilizing the discharge of water, it may be thrown to a considerable distance on either side of the channel dredged. There is, however, an alternative arrangement by which the material can be deposited on either bank of the river to a distance of 4,000 feet from the dredger. Three anchor spuds—huge bulks of timber 60 feet long and 24 inches square—two at the stern and one at the bows, passing right down through the hull of the ship, constitute no unimportant part of the gear, for these may be used to hold or pivot the dredger when the cutters are in motion. On the port side of the *Hercules* there is fitted what is termed a side trailer. This is also used for dredging and can be operated either in conjunction with the cutters or by itself. The side trailer has no cutter device and acts entirely by suction, promoted by the centrifugal pump, to which it is connected. It disposes of the sludge through the same medium as the bow "suckers"—that is, through the discharge pipe at the stern.

In dimensions, the *Hercules* is 216 feet over all, with a beam of 40 feet, and draws about 6½ feet of water when in dredging trim. The vessel was engined by the Wallsend Engineering Company, and, it is interesting to note, is fitted with four of Babcock & Wilcox's patent water-tube marine boilers. These boilers, which have been constructed in accordance with the requirements of the Bureau Veritas, have a collective heating surface of 12,080 square feet and a fire-grate surface of 332 square feet and can supply steam for 2,500 indicated horsepower when burning Queensland coal. The working pressure is 200 pounds to the square inch. They are arranged in pairs, back to back, and have two stokeholes. These four boilers necessarily form an important part of the equipment of the *Hercules*, for upon them devolves the responsibility for supplying power for the whole of the machinery, embracing as it does twin-screw engines for propelling the vessel at 7 knots, a triple-expansion main engine for working the centrifugal dredging pump, two sets of compound engines for working the dredging cutters, a large pair of engines for hoisting and lowering the cutters, an electric-light engine, an engine for driving the workshop machinery, and various auxiliary appliances in the engine room, steam capstan, steam steering gear, and a pair of powerful winches for working the spuds. For the enormous power generated, these boilers take up a comparatively small area of space. They also possess many other advantages, not the least of which, to avoid going into technicalities, are that steam can easily be raised in an hour from the time of lighting the fire, and that if repairs become necessary through neglect, the worst that could happen would be the overheating of a tube, which could be replaced by an ordinary mechanic at a slight cost. It is, perhaps, hardly necessary to add that during the trial yesterday the boilers gave complete satisfaction and proved a not uninteresting feature to those who were invited to inspect the vessel. This type of water-tube boiler has undoubtedly a future before it.

The trial trip, which lasted several hours, was carried out with the most gratifying results to all concerned. The most interesting of the tests was that of the centrifugal pump, which, on being set in motion, proved its wonderful capabilities and power by throwing a huge stream of water with terrific force from the end of

the 33-inch discharge pipe. The capacity of this gear, it may be mentioned incidentally, is equal to dredging 2,500 cubic feet of sand an hour and removing it 1,000 feet. When actually at work, the dredger will have a crew of 50 men and will be controlled throughout by one man from an operating room on the upper deck, by means of levers, telegraphs, electric bells, whistles, and telephones. Complex as is this arrangement, it can be worked with the greatest ease imaginable.

COMMERCIAL EDUCATION IN SCOTLAND.

For some years, educationists and business men in Scotland have been giving attention to the subject of commercial instruction in connection with the public schools and higher educational institutions. In January of this year, the Edinburgh Merchant Company and Chamber of Commerce and the Leith Chamber of Commerce remitted to a joint subcommittee the consideration of how the present system of education should be altered, so as to bring it in consonance with the needs of business men; with power to take such action as they might deem proper in support of the movement for rendering commercial instruction more efficient and extended. The committee has just issued a report. It is explained in the first few pages what steps were taken to procure information. Forty-three witnesses were examined, including prominent educators and representative men of affairs, and in the course of the investigation the committee collected printed matter relating to the subject, consisting of productions by the witnesses, prospectuses, etc., of schools, and official reports on commercial education in certain continental countries and in the United States.

The main conclusions arrived at by the committee are, briefly:

(1) That commercial subjects properly so called should not be taught in the public schools, but that the study of arithmetic, of history, and of geography should have a commercial application; the aim of the school course should be to give a sound general education fitting pupils for entering on a commercial career.

(2) The better teaching of modern languages is also a first necessity for the improvement of commercial education.

(3) Faculties of commerce should be established in the universities.

Omitting the introductory pages, the report is as follows:

I.—WHAT IS COMMERCIAL EDUCATION?

For the present purpose, it may be sufficient to say that the term is used to denote the whole course of educational training for a business career, whether it consists of general education or education of a specialized nature bearing on commerce. In the elementary stage, there need be no distinction in the training of a boy destined for business and of another who may look forward to a professional or

literary calling. It is only after the foundation of general education or culture has been laid that questions arise as to teaching ordinary subjects so as to have a commercial application and introducing other branches which are necessary to the proper equipment of those intended for business. The nature and extent of such specialization will depend upon the description of business career aimed at and the length of time which the pupil can remain at school or give to the prosecution of study after leaving school.

II.—EXISTING EDUCATIONAL PROVISION.

For the great majority of boys and girls who leave school at the age of about 14 to enter business houses as clerks, shop assistants, etc., the only school education available is that of the elementary school, which, in Scotland, is provided in every burgh or parish by the school board, and in certain places also by voluntary effort. In some of these schools there are now advanced departments, in which the curriculum must make provision for adequate instruction in the ordinary English subjects, and, as a rule, drawing and such other of the following subjects as the Scotch education department may determine, viz, languages, mathematics, and science. There has also recently been established a limited number of higher grade schools having a "commercial" as well as a "science" course. In the former, it is declared that the education is "predominantly commercial," and pupils must, as a rule, take, in addition to the ordinary English subjects and drawing, "one or more modern languages, bookkeeping, shorthand, and knowledge of commercial products." Although this higher education is now placed within the reach of all who obtain the merit certificate in the elementary school, it has been found that the proportion of pupils who remain to take advantage of it has as yet been small. There are, however, evening continuation schools, at which those having the desire may, to some extent, revise or supplement their elementary education. One of the objects of these schools is to give "opportunities of learing the scientific principles which underlie the employment upon which they (the scholars) have entered."

On the other hand, to those whose parents are in a higher social position, or who themselves have gained bursaries, entitling them to higher education, the secondary school is available. In this type of school, there is not only the common elementary grounding, but also a superstructure of advanced education divided into classical and modern, the modern in some cases being subdivided into a commercial side and a science side. The commercial course usually extends over three or four sessions, and includes modern languages, commercial geography, commercial correspondence, mathematics, commercial arithmetic, bookkeeping, and shorthand. At schools of this class, the age on leaving is, of course, higher than at the elementary schools—from 16 to 18—and pupils are drawn for apprenticeships which may lead to the higher positions in commerce.

As connected with this branch of the report, it may be proper here to refer to the means adopted by the Scotch education department to put a "hall mark" upon the education given at the primary and secondary schools, respectively. In the former there is the merit certificate, which will be granted to any scholar over 12 years of age who, subject to certain conditions, "shows thorough proficiency in the three elementary subjects of reading, writing, and arithmetic." This certificate is regarded by the department "as marking in a fairly definite way the dividing line between a primary and secondary education;" is necessary as a passport to the advanced departments of elementary schools, or to the higher grade schools; and is also valuable as an official attestation of the attainments of pupils who require to leave school on the completion of the elementary course.

To those pupils who continue their education, either at a primary or secondary school, suitable tests are applied by means of leaving certificates, which, since

1888, have been granted annually by the department. These consist of different classes: lower grade, higher grade, and honors. The lower grade is usually taken at the age of about 15, the higher grade and honors at the close of a full secondary course. The subjects having a commercial bearing in the examination, apart from English, are French and German—in which commercial, in addition to literary, questions are set—and bookkeeping and commercial arithmetic. It is understood that a large number of university and professional authorities have agreed to accept the leaving certificates in lieu of their own preliminary examinations, and in this way, as well as from their importance otherwise, these certificates, especially those of the higher grade and honors, are regarded as of great value.

In centers of population, there are usually to be found the means of continuing education on more or less specialized lines, and of obtaining instruction in the somewhat mechanical arts of shorthand and typewriting. In this respect the youths of Edinburgh, Leith, and surrounding districts are exceptionally fortunate in having the Heriot-Watt College, where students may obtain, at very moderate fees, courses of instruction suited to their special business requirements.

University education, to a limited extent, is also available to the commercial student. He may attend, *e. g.*, the class of commercial and political economy and mercantile law, founded in the University of Edinburgh by the governors of two of the merchant company endowments, or the classes of French and German established under recent ordinances.

III.—DEFECTS OF THE PRESENT EDUCATIONAL ARRANGEMENTS.

There is a consensus of opinion among the business men who gave evidence that elementary education is so imperfect that many boys entering offices or warehouses write in a slovenly way; that their arithmetic is deficient; and that they are unable to compose a letter properly, and in some cases even to spell correctly; and these witnesses attribute this to the want of a thorough grounding in elementary education. The educational witnesses explain this failure by the fact that too many branches are taught in the elementary course, and state as their opinion that it would be more profitable to the great majority of pupils of all classes if the teaching of any language other than English were postponed until a later age than at present, so that attention might be concentrated on what is termed an English education. It may be assumed that the evil complained of is not likely to be so pronounced in future, as the new code and the merit certificate have been arranged to secure greater attention to the essential subjects of an elementary education. A further explanation is offered by educationists so far as handwriting is concerned, viz, that a careless habit is induced by the speed at which pupils find it necessary to write in their numerous examinations.

While no general complaint has been made to the committee on the subject of secondary education, it has not escaped criticism in detail. Viewed from the standpoint of business men, it is considered that too much time and attention are still given to Latin and Greek and too little to French and German; that the modern languages are not so thoroughly taught or mastered as to be used with facility in business; that the teaching of history, geography, and arithmetic is too little adapted to the needs of a business career; that bookkeeping taught at school is of little or no value; and that there is not enough provision for the teaching of science. There is also the want of encouragement in the shape of bursaries set apart to pupils in the modern side of the secondary schools. On the other hand, the educational witnesses state that their chief difficulty with boys intended for business is to get them to remain a sufficiently long period at school to take advantage of a full course of instruction. They consider also that the classical side has

its attractions for clever boys, even for those who may be looking forward to a commercial career, and that the modern side is too much looked upon as the resort of the backward or less promising pupils.

The committee have been much impressed by the great stress laid upon the inefficient teaching of modern languages through the want of properly trained and qualified teachers. Under present arrangements, the work is to a large extent intrusted to foreigners, who, as a rule, are not educated in the same way as the teachers of Latin and Greek, and do not sufficiently realize or sympathize with the difficulties encountered by boys in learning foreign languages. The lack of sympathy between teacher and pupil naturally interferes seriously with influence and discipline.

Regarding the training of teachers generally, it appears that there is no provision at present in the normal schools for training teachers in commercial subjects, but that science is receiving special attention.

It has been suggested to the committee that, so far as commercial education is concerned, some of the text-books are not sufficiently practical, and that questions set by examiners are occasionally open to the same criticism. It is scarcely necessary to add that these are matters of great importance bearing directly on the state of commercial education.

In the second branch of this report, the importance of the leaving-certificate examinations, conducted by the Scotch education department, has been alluded to. It may now be useful to give from Sir Henry Craik's report for this year, issued in August last, the following extracts showing the result of the test in the subjects of examination bearing on commercial education.

French—lower grade.—"The answers to the literary questions were creditable; those to the questions on commercial French were worthless."

French—higher grade.—"The philological answers were poor, in large measure owing to imperfect text-books; and those on commercial French were unsuccessful."

German in both grades.—"The commercial questions were uniformly answered in a very unsatisfactory way."

Bookkeeping.—"The second part of the paper was not, however, so well done. * * * The third part of the paper was also disappointing."

Commercial arithmetic.—"As in former years, many candidates were presented who were quite unprepared for an examination of this character; in other cases, the work was hurried and incorrect."

Certain defects have been pointed out to the committee in connection with university education for business men. There is the disadvantage at which students of modern languages are placed as compared with students of Latin and Greek in the preliminary and the general bursary examinations at the universities. In these examinations, while the full marks for Latin and Greek are 100, those for French and German are only 50. The classes in French and German do not have the same academic standing as those for Latin and Greek, inasmuch as the former are merely lectureships—the lecturers not being members of the senatus—while the latter have all the privileges of full equipped chairs. Lastly, there is no provision for obtaining a complete course of university education suited to the business man or a degree in commerce.

It may be remarked, further, that there is no general provision, as in the case of students training for the professions, for guiding and stimulating the education of young men aiming at following a business career. On leaving school, they are left to the freedom of their own will in the matter of education, and may either refrain altogether from prosecuting their studies or, if a sense of duty and a laudable ambition prompt them otherwise, may choose such courses of instruction and follow them with such measure of diligence as they think proper. Attempts have been

made to supply this want by the institution of the examinations of the bankers' institute and to a limited extent, in Scotland, of such examinations as those which have for several years been conducted by chambers of commerce and other public bodies.

At this stage, it may be proper to refer to the opinion held by some business men that the facilities which exist for mental improvement are not taken advantage of by youths during their apprenticeship to the extent they might be. It would seem that with many, once they are free from the restraint of school discipline, there is a disinclination to study and a want of the moral earnestness and the perseverance which have been understood to be characteristic of the Scottish race. Possibly, the inordinate love of pleasure and the present-day rage for sport account largely for this unfortunate tendency. At least they form a serious obstacle in the way of the improvement of the commercial education of the country.

IV.—NECESSITY FOR IMPROVEMENT.

The need for improvement in commercial education is due mainly to three causes: (1) The extraordinary development of business by the introduction of railways, and the expansion of international commerce throughout the whole civilized world by the introduction of steamships and telegraphs, all of which has taken place within the last two generations; (2) the changing conditions and methods of conducting business, arising, to a large extent, out of this development and expansion—large corporations and limited-liability companies steadily supplanting private firms in conducting existing businesses and in starting new businesses and trading concerns of all kinds; and (3) the commercial rivalry of continental nations and America, who have more thoroughly realized the necessity of, and made very complete provisions for, commercial education.

Taken cumulatively, these reasons demand, in the opinion of the committee, the early and earnest attention of all concerned to the task of improving commercial education. In the past, not a little credit for the commercial position among the nations to which Scotland has attained is due to the education which was available; but if that position is to be maintained, it is imperative that advance must be made in education commensurate with the requirements of the present time. The committee believe that a sound and sensible education, both primary and secondary, is the first requisite for the business man. Provision must also be made for producing men of high education and wide culture fitted to fill responsible positions in the large undertakings of the country and to take their place in the important and responsible work of public administration, which so largely devolves on members of the mercantile classes.

V.—CONCLUSIONS.

The committee beg leave to state the following as the conclusions at which they have arrived:

(1) That primary education only should be given to pupils under 12 years of age, and that secondary or higher subjects should not be commenced until the pupil has gained a merit certificate or passed an equivalent examination. If this method were followed, the committee believe that not only would the pupil be better grounded in a sound English education, but would also be more likely to get the full benefit to be derived from a secondary course.

(2) That it is necessary to provide a more modern secondary education that would better appeal to a large proportion of the pupils. It is acknowledged that the study of Latin and Greek is an admirable mental training, and that some acquaintance with Latin is very helpful to the student of English. Much of the study of Latin and Greek, however, has the disadvantage of being altogether divorced from

everyday life, and it is only natural that boys should take more interest in the languages and affairs of the world in which they live. The committee have no intention of decrying classical education while asserting that the study of English literature—of English and Scottish history, of the geography of the world and especially of the English-speaking world, of the elements and principles of science and mathematics—is real education likely to stimulate a boy's highest faculties.

(3) That commercial subjects properly so called should not be taught at school; but that, as provided for in the Scotch code with reference to higher grade commercial schools, "the study of arithmetic, of history, and of geography should have a commercial application." The committee consider that the aim of the school course should be to give a sound general education fitting pupils for entering on a commercial career.

(4) That the better teaching of modern languages is also a first necessity for the improvement of commercial education. To enable this to be done, there is required, to begin with, an admission on the part of educational authorities that a man may be an educated and even a cultured gentleman although he has not seriously studied Latin or Greek; and, further, that both France and Germany possess invaluable literatures, with the advantage that they are in languages which are living and not dead. Three steps seem necessary to stimulate the study of modern languages:

(*a*) That the universities should show proper respect for modern languages by giving the teachers of French and German the same status as the professors of Latin and Greek, and by approximating the value for these subjects in examinations.

(*b*) That students should be induced by bursaries and other means to master modern languages, so that there may be trained for the teaching of French and German Englishmen and Scotsmen of equal ability and culture to the men who now teach Latin and Greek. The committee are much impressed by the consensus of opinion among the educational authorities who gave evidence that modern languages can never be properly taught in this country until taught by Englishmen and Scotsmen who have had university training and have resided abroad.

(*c*) That secondary schools should also dignify the teaching of modern languages by placing them on a level with the dead languages in bursary competitions and in all other respects, and by offering proper remuneration to the teachers of modern languages.

(5) That boys should not leave school to enter on a business career until they attain the age of 16, those who can afford to do so being encouraged to remain till 17 or 18; and that employers should, as far as possible, require the production of and give due recognition to the leaving certificates by the Scotch education department as evidence of educational attainments. The committee would suggest that the department be approached with the view of instituting, in connection with school education, group certificates of different grades that would come to be universally known and recognized by business men in their selection of apprentices.

(6) That it is most necessary young men should continue their education, after they have begun business, during their leisure hours. In this way the defects of ordinary education may be remedied, and it is during the years of apprenticeship that young men may most profitably study commercial subjects. The committee agree with the witnesses that it is not natural for boys at school to take any interest in such subjects as bills of lading or foreign exchange; but that young men in offices and factories may with advantage study the theories and laws regulating matters with which they are in constant touch in their daily work. Of course, if a young man is to derive benefit from the evening classes at the Heriot-Watt College or any similar institution, he must have set his heart on his work.

(7) That in view of the increased attention being given to strengthening and

rendering more efficient the modern side in secondary schools, and of the tertiary schools which exist in large towns, such as the Heriot-Watt College in Edinburgh, the committee are not prepared to recommend the institution of a purely commercial school on the lines of the continental commercial schools at Antwerp, Leipzig, and other places, or of the London School of Economics and Political Science.

(8) The committee, while recognizing the good work being done by certain chambers of commerce and other mercantile bodies in Scotland, by means of examinations for commercial certificates, are of opinion that such work would be more efficiently accomplished on a uniform system by a national examining board. It is accordingly suggested that the proposal be brought before the Scotch education department.

(9) That to enable commercial education to take its proper place in the educational arrangements of the country and to fully meet the requirements of commerce, it is desirable that faculties of commerce should be established in our universities. It is the opinion of the committee that such faculties would have a very beneficial effect in raising the status and importance of the commercial side in the secondary schools by giving it, like the classical or science side, an opening to the university, by molding and regulating the course of study, and by inducing pupils of ability, who at present prefer another course because it leads to the university, to study for a commercial career. Turning to the interests of commerce, the committee believe that a university education would be of the greatest service to the men who are to occupy the chief positions in large commercial undertakings. To discharge aright the important and delicate duties and responsibilities which devolve upon them, the development of mind and width of culture which are produced by university study are as essential as in the case of the professional man, and there is no reason why the possession of a university degree should not be placed within the reach of the one as well as the other.

The classes of modern languages, of political economy, and possibly one or more of the present history and law classes would form the nucleus of a faculty of commerce, and to these might gradually be added classes having more direct reference to the history and practice of commerce. The education to be provided by such a faculty would primarily be taken advantage of by young men having the means and leisure to attend as regular students; but others engaged in business might, as is the practice with lawyers' and accountants' apprentices, also take the classes if suitable hours were fixed. It would also be available for the training of those who might act as teachers of commercial subjects in schools.

Although the committee hold the opinions in regard to university education above expressed, they feel that the evidence given by the business men who came before them shows that the need for that education is not appreciated by the mercantile community, and they respectfully urge chambers of commerce and other mercantile bodies to consider this important subject and mature the opinion of business men in regard to it.

The committee have not thought it necessary to make any recommendation in regard to the education of girls as distinguished from that of boys. They hold that for the purpose of commercial education differentiation is not required, and that if their views as above expressed were adopted, the increasing number of girls who look forward to clerkships, as well as the few who aspire to higher positions of trust in mercantile life, would, equally with boys, have the means of obtaining suitable education.

RUFUS FLEMING,

EDINBURGH, *October 12, 1900.* *Consul.*

BILLS OF LADING IN THE NETHERLANDS.

Consul Listoe, of Rotterdam, under date of October 5, 1900, says:

I transmit a circular on the subject of through bills of lading, lately issued by the Grain Dealers' Association of Rotterdam, and directed particularly to the boards of trade and similar bodies in the United States.

I am not in a position to express an opinion as to how much cause the grain dealers of Rotterdam have for the complaints set forth in the circular, but would state that I have frequently heard objections to the damaged condition in which American grain, particularly corn, arrives at this port; and I therefore suggest that the parties interested give this circular from the Rotterdam grain dealers due consideration.

CIRCULAR OF THE COMMITTEE OF GRAIN DEALERS AT ROTTERDAM.

ROTTERDAM, *September, 1900.*

GENTLEMEN: The rapid growth of direct business between interior points of your country and Europe has made shipment on through bill of lading an almost inevitable institution.

Buyers, desirous of making their purchases at the places of production or at central interior points, have to accept or to pay drafts against through bill of lading; as a rule, the shippers do not care or can not afford to wait for a port bill of lading before issuing drafts.

When drafts are drawn against shipping documents, the latter ought to be of such a nature as to give full security to the drawees and to enable the latter to claim the goods from the carrier, who has to deliver the goods at destination. Through bills of lading in their present form do not offer that security, as consignees have found out often and again to their detriment.

It is not our object to indulge in a long dissertation on the defects of the "through bill of lading;" suffice it to say that the feeling against the through bill of lading in its present various forms is growing so strong among European buyers that the time is near when they will be forced to refuse to accept drafts against such a document.

This would constitute a serious danger to the development of trade with your market, a danger so serious that we, as representatives of an important branch of trade here, have considered it advisable to take up the matter and to appeal to you and other influential corporations, bodies, and concerns, in view of asking your support to our endeavors to find a remedy to the existing state of affairs.

The principal grievances of buyers are:

(1) That the goods can be kept waiting for reshipment at intermediate points, chiefly on the seaboard, for an indefinite time, causing loss of interest, deterioration of quality, shrinkage, etc. In several cases, goods shipped on through bills of lading from interior points have taken six months and over to reach our port, whereas six weeks would have been ample.

Manufacturers ordering raw material from your side have consequently found themselves placed in the most awkward position; merchants have found their calculations upset by the delay and had to sell goods at a heavy loss, instead of making a profit, had the goods reached them within a reasonable time.

(2) That in virtue of the through bill of lading, the holder thereof has not a single lien on the last carrier, who delivers the goods at destination.

The freight agent, or the carrier, who issues the through bill of lading, signs on behalf of the other carriers severally, but not jointly. The next carriers give receipts or ordinary bill of lading to their predecessors for the quantity which they have received from the former, and if the quantity is less than that mentioned in the through bill of lading, it is hardly possible to enforce delivery of the deficiency.

The convention made at Berne in 1890 by the principal continental powers of Europe has regulated the transportation of goods on through bills of lading over different railroad lines. Under that convention, any line taking goods shipped on through rates is responsible for the full execution of the freight contract and the proper delivery of the goods at destination.

The different lines over which the goods are transported have recourse upon each other, and the line which is proved to have caused the damage or loss has to indemnify the line held responsible by shipper or consignee.

We are convinced that you feel the greatest interest in the continuance and further increase of business between your place and countries on this side of the ocean, and that you will give us your very valuable support to try to remove obstacles.

We therefore hope that you will take up the matter with exporters of your place and induce them to try to make arrangements with freight agents, carriers, etc., in the spirit described above.

We feel sure that you will agree with our views, and that you are willing to give us your assistance in this most important matter.

Awaiting your favorable reply, respectfully yours,

THE COMMITTEE OF GRAIN DEALERS AT ROTTERDAM.

J. VAN DER DUSSEN,
President.

H. VAN RANDWIJK,
Secretary.

FRENCH CARPET RENOVATOR.*

A new patent carpet-renovating machine consists of a strong cast-iron frame 24 feet long, 6 feet broad, and 5 feet high, securely bolted to the floor. Within this structure, and at the back, is situated a take-up roller, and on this the carpet is drawn by an arrangement of straps and clasps. Similar straps attached to a roller in front carry the carpet from the back roller over a table extending along the center of the machine, which is provided with roller edges to facilitate the movement of the carpet.

While passing over this table, the carpet is brought under the operation of two sets of reciprocating brushes, one set at the front and the other at the back of the machine.

At each movement, the brushes are brought into contact with two copper feed rollers, revolving in troughs filled with spirits, which moisten the brushes just sufficiently to diffuse a slight quantity of the spirits over the surface of the carpet.

*A picture of the machine, accompanying the report, has been filed for reference in the Bureau of Foreign Commerce.

The pressure of the brushes upon the surface of the carpet is regulated by a series of easily manipulated adjusting screws, situated on the top of the machine.

The spirit troughs are protected by lids which are made in sections, so that any part of the machine, when not in immediate use, can be put out of operation by simply closing the lids and raising the corresponding section of brushes.

The carpet, after leaving the table, is passed on to the front roller, the tension between which and the take-up roller is regulated by a suitable brake at the end of the machine.

A carpet-steaming apparatus for raising the pile can also be incorporated with the machine. It consists of an arrangement of steam tubes inclosed in a perforated copper case, the surface of which forms the center section of the table. The advantages of this process are as follows:

(1) Great economy in working. A man and a boy are sufficient to work the machine, and they are required only to adjust and remove the carpets. The machine moving automatically, other work, such as brushing, folding, etc., can be done simultaneously. From 80 to 100 yards of carpet can be thoroughly cleaned in one hour, and the quantity of spirits required for this amount of work varies from 4 to 6 gallons, according to the condition of the carpet.

(2) Thoroughly effective cleansing. The carpet is cleaned to the core of the pile, and not merely on the surface, as is usually the case by hand labor. There is also an entire absence of cloudiness, as the whole surface of the carpet is subjected to the same degree of uniform pressure and friction, and the spirits are diffused in equal proportions.

(3) There is absolutely no softening or shrinking of the fabric by this process, no water being used.

W. P. ATWELL,

ROUBAIX, *October 4, 1900.* *Consul.*

HINTS TO EXPORTERS OF COTTON GOODS.

The French consul at Trebizond, Turkey, calls attention to the increased sales of Italian cotton goods in that district. In 1898, the sales of Italian cotton threads amounted to $19,300, whereas in 1899 these sales increased to over $88,000.

In Anatolia, cotton goods are still imported chiefly from Great Britain. A profitable trade is carried on in cheap cottons.

In Zanzibar, cotton goods form the chief article of commerce. Gray cloth is sold to a very large extent under the name of "Americani." Printed cotton kerchiefs, worn by the native women and

called "kangas," always find a ready sale. The Manchester mills have the designs for these kerchiefs executed at Zanzibar, in order to meet the taste of the natives, and, owing to the better and clearer print, have almost crushed competition from the Netherlands. German firms in Zanzibar import what are called "kisutus" from the Netherlands, and these find great favor with the natives, and are said to yield a profit of 40 per cent. The natives like bright colors and clear prints. There is also a great demand for indigo-colored cotton goods, called "kaniki," which are imported from Manchester and Bombay. Manchester also supplies loin cloths ("kikoi"), with colored borders, which find ready sales.

According to another report, finer grades of cotton handkerchiefs find a ready market in Buenos Ayres. Colored handkerchiefs are preferred, especially those of blue and violet designs.

Since bananas have become an important article of export from the Canary Isles, the importation of cotton batting has greatly increased, as the latter is used to a great extent in packing bananas. In 1899, over 30,000 pounds of cotton batting was imported into the Canary Isles, chiefly from Great Britain and Germany. The batting comes in bales weighing about 130 pounds. The batting imported from England comes in pieces of 12 yards by 1 yard wide. The prices run from 1s. 2¾d. to 2s. 10½d. (29½ to 69 cents), according to quality. Germany ships the batting in sheets 1 meter by 60 centimeters (39.37 by 23.62 inches). Twelve sheets weigh 3½ pounds. Prices average 1.35 marks per kilogram, which is equal to 14.6 cents per pound avoirdupois. Cheaper grades, in rolls of 1 to 1½ kilograms (2.2 to 3.3 pounds), at 1.1 to 1.3 marks per kilogram (11.9 to 14 cents per pound avoirdupois), are also shipped.

WALTER SCHUMANN,

MAINZ, *October 18, 1900.* *Consul.*

HINTS TO EXPORTERS OF CERAMICS.

A German journal states, in regard to ceramic articles, that in Smyrna, French and German ware has almost entirely replaced English ware, owing to the lower price of the former. The imports of ceramics at Smyrna are stated to amount to about $50,000 per annum, of which only one-tenth is from the factories of Staffordshire, the greater part coming from Saargemünd, Germany, and from Belgium.

According to a British report on the importation of earthenware into the Canary Isles, the demand during the year 1899 was considerably greater than in former years. France supplies the greater

part, although Great Britain and Germany have their share of the trade. In glassware, the cheaper kinds are preferred to the expensive English ware, and Germany has secured the largest share of this trade, notwithstanding keen competition from Belgium. During the year 1899, five times as much window glass was imported into the Canary Isles as in the previous year, the greater part of the supply coming from France and Belgium.

In Brazil, according to another report, half-porcelain ware finds the readiest sale. German and Belgian ware is preferred, owing to its pleasing appearance.

According to a French report, it would seem that a good export business to Persia in all kinds of glass and porcelain ware could be cultivated. Fancy glass articles come chiefly from Baccarat, whereas the cheaper articles, such as drinking glasses, are imported from Bohemia. Window glass and lamp chimneys are chiefly of Russian origin. Although glass is manufactured in Persia, it is of very inferior quality and not adapted for general use.

The largest import houses in Teheran, Persia, are agents of Messrs. Ziegler & Co., of Manchester, England; Messrs. Graeneweg, Dunlop & Co., of Amsterdam, Holland; and the Persian Gulf Trading Company, of London, England.

WALTER SCHUMANN,

MAINZ, *October 12, 1900.* *Consul.*

ESTIMATE OF BEET-SUGAR PRODUCTION, 1900.

The first estimate of the beet-sugar crop about to be garnered from the sugar-beet fields of the world have just been published. Though these figures have been very carefully collected by most skillful agents in every beet-sugar-producing country, still they are to be considered as only approximately correct.

They are as follows:

Country.	1900–1901.	1899–1900.	1898–99.	1897–98.	1896–97.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Germany	1,875,000	1,798,631	1,721,718	1,852,857	1,836,536
Austria	1,050,000	1,108,007	1,051,290	831,667	934,007
France	1,060,000	977,850	830,132	821,235	752,081
Russia	940,000	910,000	776,066	738,715	728,667
Belgium	340,000	304,000	244,017	265,397	288,009
Holland	190,000	171,029	149,763	125,658	174,206
Other countries	345,000	253,929	209,015	196,245	202,990
Total	5,800,000	5,523,446	1,982,001	4,831,774	4,916,586

HENRY W. DIEDERICH,

BREMEN, *October 22, 1900.* *Consul.*

PROPOSED ABOLITION OF SUGAR BOUNTIES.

Consul Barnes transmits from Cologne, October 21, 1900, the following translation of an article from the Cologne Gazette relating to the abolition of sugar bounties, as proposed by the German, Austrian, and French delegates in conference in Paris:

At their final sitting to-day, the German, Austrian, and French delegates who have been discussing the preliminaries of the abolition of the sugar bounties came to a satisfactory understanding. France declared herself willing to agree to the abolition of the direct bounties, while reducing the indirect bounties by 50 per cent and making a proportionate alteration in the duties. The German and Austrian delegates proposed that France should reduce the indirect bounties by two-thirds; but the 50 per cent reduction was finally considered sufficient to afford a common basis of discussion at a new sugar conference shortly to be held at Brussels. Russia, Great Britain, Italy, and Belgium will be invited to send representatives to the Brussels conference.

In connection with the future attitude of Russia, Austria-Hungary has made two reservations in regard to her eventual position in the matter. These conditions, however, will not affect the convening of the Brussels conference.

LIQUID FUEL IN STEAMERS.

The following is from the London Times:

The steamship *Cowrie* of the Shell Transport and Trading Company, managed by Sir Marcus Samuel & Co., which is now discharging a cargo of oil in the Thames, has steamed all the way from Koetei, in Borneo, to London—9,250 miles—using nothing but liquid fuel; and the boilers for supplying the steam for the pumps now discharging the cargo are fired by the same material. The oil is not burned by a thin layer of incandescent coal, as is the case in some systems, but is pulverized or reduced to spray by means of a steam jet at the furnace door, where it is delivered from furnace tanks above the boilers. The *Cowrie* was formerly fired with coal, and her conversion to liquid fuel has been attended with advantageous results. Her complement of stokers has been reduced to six, as against sixteen necessary with coal, and her speed has at the same time been slightly improved. Moreover, the change has effected an important saving in bunker space, for her consumption of oil on this voyage was only 22 tons a day, whereas her daily consumption of coal used to be 35 tons, and a ton of oil is calculated to occupy only 34 cubic feet, against 45 feet required for coal. Oil, too, can be carried in the water-ballast tanks, and can also be taken on board much more quickly than coal—on a recent occasion 300 tons were pumped into a German steamer in one hour.

The oil yielded by the Borneo fields forms an excellent fuel when used just as it comes from the ground, and is said to be superseding both the Russian and the American products in the Far East, where it is extensively used for fuel in steamers—*e. g.*, the Hamburg-American boats engaged in the eastern trade. To give some idea of its cost, it may be mentioned that, according to the terms of a recent contract, which need not be specified exactly, it is to be delivered at the price of 30s.

a ton at Singapore and Hongkong, 32s. 6d. ($7.90) at Shanghai, 35s. ($8.51) in Japan and Colombo, and 50s. ($12.16) at Suez. The *Cowrie* brought from Borneo over 6,000 tons of solar oil, the greater part of which is destined to be used by the Gas Light and Coke Company for the production of oil gas for enrichment purposes, and it is an interesting fact that the vessel (or one like her) will be bunkered with the refuse that remains after the oil has been utilized in this manner.

I wonder whether it is possible the Standard Oil Company does not use liquid fuel in its oil-tank steamers.

MARSHAL HALSTEAD,

BIRMINGHAM, *October 3, 1900.* *Consul.*

RAISINS AND OTHER FRUIT IN MALAGA.

There is a considerable shortage in the Malaga raisin crop. Up to the 15th of September, there was abundant promise of a full crop; but on that night, a great storm of rain and wind swept over the vineyards of the famous Malaga raisin district, doing great damage, not only to the grapes still on the vines, but to those that had been cut and were being dried into raisins. This heavy storm was unfortunately followed by a succession of cloudy and rainy days, which made it impossible for the grapes to dry properly, and, in consequence, a considerable percentage of the crop already cut for raisins was ruined.

In addition to this, large quantities of grapes still on the vines became worthless for raisins, on account of the damp, and were sent to the wine press.

Up to this moment, it is estimated that the raisin crop is short fully 30 per cent. If there should be a recurrence of rainy and cloudy days, the shortage would reach at least 50 per cent of the average crop. Meanwhile, some of the merchants here who sold raisins on the basis of August and September prices have sustained heavy losses. It is reported that one German ship which was to have carried $250,000 worth of raisins from Malaga to Hamburg and other German ports on the 1st of October left almost empty. It is also reported, in this connection, that in several instances firms that had taken orders in August and September, not only can not fill them, but are not making good the losses to their clients in Germany and elsewhere. Other firms, unable to make delivery, have manfully paid $1 a box dead loss to their disappointed customers. The principal losses have been sustained in the so-called Malaga seedless raisins. There was a heavy demand for these goods because of the failure of the currant crop in Greece, and now, because of the short crop here, the prices have advanced 100 per cent during the past thirty days.

Finest cluster raisins are worth 25 pesetas ($4.82) the box of 22 pounds, as against 20 pesetas ($3.96) at the same period last year; second-grade clusters are worth 22.50 pesetas ($4.34) the box, as against 18.50 ($3.67) last year; and finest loose raisins, 17.50 pesetas ($3.38), as against 12.50 pesetas ($2.41) last year.

There are good reports of the Malaga almond crop. It is full and fine, but owing to the failure of this crop elsewhere in Spain, as well as in France and Italy, prices have advanced from 80 to 100 per cent.

The lemon crop is 15 per cent less than last year, and the lemons are small; prices are 10 per cent higher.

BENJ. H. RIDGELY,

MALAGA, *October 4, 1900.* *Consul.*

SPANISH SHEEP AND GOAT SKINS.

SHEEPSKINS.

Several kinds of sheep are bred in Spain, but the most valuable, on account of the excellent quality of the skins, are those found in the provinces of Murcia and Catalonia and in the district known as La Mancha, in New Castille; also those in the province of Extremadura, which, however, are esteemed more for their fine wool than for the pelt.

It is a notable fact that the finer the wool the poorer is the skin for tanning purposes.

It is in Extremadura that the celebrated Merino sheep are bred. Merino wool was at one time considered the finest obtainable in Europe, but, like many other natural sources of wealth in Spain, sheep farming has suffered from lack of enterprise and energy.

Spanish sheep are white, excepting those of La Mancha, which are black.

Sheep are classified under the heads of lambs and sheep or ewes. Until the animal is one year old, it is sold as a lamb. The skin of the lamb is used for making gloves and is classified into "firsts" and "seconds," according to the fineness of the grain and the number of defects in the skin.

The skin of the Extremadura sheep is unsuitable for gloves and can only be used for inferior articles.

In Millau and St. Julien, in France, in Yeovil, in England, and also in several parts of Germany, there are large tanneries devoted to the preparation of the skins exported from Murcia, Catalonia, and La Mancha. These tanneries, either directly or through commission firms, send a large proportion of their output to the United States, which is an important market for glove skins.

When the animal is more fully grown, its skin can no longer be used for making gloves, and it is then applied to the manufacture of fancy goods, bookbinding, etc. Sheepskins are prepared in two ways: when tanned with sumac they are used for making cigar cases, pocketbooks, purses, etc.; but when required for leggings, aprons used by agricultural laborers, harness or anything that must be subjected to wear and tear, the skins are oak tanned. The former—*i.e.*, those prepared with sumac—are extensively exported from Spain to Germany, whereas the latter find, or used to find, a good market in Cuba, Porto Rico, and the Philippines.

The manner in which the skin is removed from the carcass is as follows: A small hole is made in one of the hind legs of the animal; a strong pair of bellows is then inserted into this little aperture and air is blown in until the carcass is well swollen. The belly is then slit open from end to end and the skin carefully removed, if necessary with the help of a knife.

The skins are collected by men who devote themselves exclusively to this work. After being exposed to the sun until a slight crust is formed on the flesh side, they are stretched on ropes in the shade until completely dried, and are then ready for export.

GOATSKINS.

These are produced in large quantities in the vicinity of Badajoz and generally in all the south of Spain. The skin of the very young kid is used only for ladies' fine gloves and is prepared principally at Annonay and Grenoble, in France. These skins also find a market in the United States in a prepared state; but with this sole exception, the entire supply of Spanish kid and goat skins is exported in the raw state to the United States for tanning into fine shoe leather, etc. This trade appears to be in the hands of French commission merchants, and I see no reason why our importers should not have their own buying agents in this country and secure their supplies at a much lower price. I shall be glad to give any firm the names of reliable agents who would execute their buying orders in the same way as is now done for the French middlemen.

The business is done here by direct contracts with the butchers, and also with sundry "collectors." These go around regularly to all the villages and bring the skins to the dealers in the towns.

In order to preserve the skins from damage by moths in summer, dealers use powdered naphthalene, which they sprinkle over them while they are being stacked.

For export, the skins are baled in small presses.

JULIUS G. LAY,
Consul-General.

BARCELONA, *October 26, 1900.*

DEMAND FOR CATALOGUES IN THE AZORES.

Consul Pickerell sends from St. Michael's, October 1, 1900, a letter from H. P. de Costa, requesting catalogues and samples of United States goods. Mr. Pickerell adds:

Mr. de Costa, upon my representation, decided some time ago to make an effort to secure for the United States some of the business that was going elsewhere, and he has had considerable success; so much, that he now formally asks that I put him in direct communication with manufacturers, and secure him catalogues, samples, and prices. For the present, this gentleman expects to pay cash, and for that reason should be entitled to close prices. Until now, I have supplied him catalogues from my collection, and have assisted him with prices; but his inquiries now cover a wider range, and I find my catalogues obsolete by reason of age.

Mr. de Costa's requirements will be at first small, but he feels confident that with time he will be able to make the business profitable.

There is no reason why we should not supply a large amount of the goods required for this island, and I feel certain that a determined effort will produce good returns. Catalogues should be sent to H. Pereira de Costa, Ponta Delgada, St. Michael's, Azores.

The letter reads, in part:

As you know, I am doing my best for bringing up the importation of American manufactures in this island, so I am coming to trouble you.

I should be pleased if you could make my name known to American manufacturers, in order to receive some catalogues and samples of cotton goods, etc. It is quite impossible to specify the kind of articles wanted, because there is such a variety and they are for the most part unknown to the merchants here, so that I can not tell the sort that might suit me best.

The catalogues, etc., that I wish, are in the following lines:

Catalogue.—Builders' hardware.

Samples, with prices.—Cotton goods, linen goods, leather goods.

Catalogues and prices.—Graphophones, stationery, general furnishing; fancy hardware for desks, tables, etc.; clocks, watches, etc.; soaps, perfumery, etc.; lamps and chimneys, shoemakers' supplies, photographers' supplies, stoves (coal and gas), tools (carpenters' and blacksmiths'), wire goods.

FRENCH-WEST AFRICAN STEAMSHIP SERVICE.

The freight, passenger, and postal service between France and the west coast of Africa has recently been modified and reorganized. Commencing October 5, 1900, there will be three departures a month of French steamers for the west coast of Africa—the 5th and 20th

from Marseilles (Compagnie Frassinet), and the 15th from Bordeaux-Pauillac (Compagnie des Chargeurs Réunis).

The mail either by the way of Bordeaux or by Marseilles, should be deposited in the Paris post-office the evening before the date of departure from Bordeaux or Marseilles. The service will be carried on by four regular lines, as follows:

(1) The line "L" from Havre to Bordeaux, to Loango and Matadi, with calls at Cherbourg, Pauillac, Saint Croix de Teneriffe, Dakar, Grand Bassam, Kotonu, Libreville, Cape Lopez, Mayoumba, Loango, and Matadi. Departures from Bordeaux on the 15th of the month, every two months, commencing November 15 next, and from Libreville on the 30th of the month, every two months, commencing on October 30 next. The speed of the steamers of these lines, required by the postal contract, is 10 knots, and a total distance to be run from Havre to Matadi is 1,822 marine leagues, or 5,466 miles, and from Matadi to Havre 1,902 leagues, or 5,706 miles. Besides the calls required by the postal contract, if the steamer is ahead of the schedule time, supplementary calls may be made. The length of the voyage, including 326 hours consumed in the calls, is, outward bound, 856 hours, or 35 days 16 hours; and the return voyage, 900 hours, or 37 days 12 hours. In other words, a steamer consumes 1,872 hours, or 78 days, in making a voyage from Havre to Matadi and return.

(2) An auxiliary line from Havre-Bordeaux to Loango and Matadi, with the same calls, except Cherbourg. Departures from Bordeaux to take place the 15th of the month, every two months, commencing October 15, 1900, and from Libreville the 30th of the month, every two months, commencing November 30. The length of the voyage is 75 days, including a stay of 116 hours at Matadi.

(3) The line "M" from Marseilles to Loango, with departures from Marseilles the 5th of the month, commencing October 5 last (first voyage), every two months; by Oran, Las Palmas, and Kotonu, and departures from Libreville the 15th of the month, every two months, commencing November 15 next.

(4) An auxiliary line from Marseilles to Kotonu, with the same itinerary, except Oran; departures from Marseilles the 5th of the month, every two months, commencing November 5 next, and departures from Kotonu the 20th of the month, every two months, commencing December 20.

For these two lines the speed of the steamers is 9 knots, and the distance from Marseilles to Loango is 1,621 marine leagues, or 4,864 miles. The time allowed, outward bound, is 761 hours; returning, 826 hours, with 14 hours' stay in Loango, making a total of 1,601 hours, or 66 days and 17 hours for a complete voyage. The reorgan-

ization chiefly affects the last two lines. The ministerial decrees have established the following conditions: Commencing October 5 last, the steamers of the Compagnie Frassinet, sailing for the ports of the west coast of Africa, will leave Marseilles the 5th of each month at noon, instead of the 25th of each month at 4 p. m. The regular mail steamers will alternate with the auxiliary steamers, as is the case at present. The regular mail steamers will leave every two months, commencing October 5. Besides the calls made heretofore, the steamers will touch going and coming at Petit-Beriby. Ordinarily, the arrivals will be at Dakar the 16th of the month; Konakry, the 19th; at Kotonu, the 28th; at Libreville, the 2d of the following month; and at Loango, the 7th of the month.

On the return voyage, the departure from Loango will take place every two months on the 7th, commencing November 7, 1900; from Libreville, the 15th; from Kotonu, the 20th; from Konakry, the 28th; from Dakar, the 30th; arriving at Marseilles usually on the 12th of the following month.

The auxiliary voyages will also be every two months, commencing November 5, the terminal point being Kotonu. The auxiliary steamers will make calls going and returning at Las Palmas, Dakar, Konakry, Monrovia, Petit-Beriby, Grand Lahon, Jackville, and Grand Bassam.

On the outward-bound voyage, the arrivals ordinarily will be as follows: At Dakar the 16th of the month, and at Kotonu the 28th. In returning, the departures from Kotonu will be on the 20th, every two months, commencing December 20 next, and the arrivals at Marseilles the 11th of the following month.

Besides the regular departures on the 5th of each month, the Compagnie Frassinet is allowed to establish a monthly steam cargo-boat service from Marseilles to the ports on the west coast of Africa as far as Dahomy, with departures on the 20th of the month.

A. M. THACKARA,

HAVRE, *October 11, 1900.* *Consul.*

TRADE NOTES FROM SOUTH AFRICA.

British papers are full of the orders placed in Great Britain from South Africa; but I fail to see in the American papers any notice of the very large and valuable orders placed in the United States in the way of mining machinery and supplies. There are also large orders for rails, etc. The question of "preferential trading" between the Mother Country and her colonies is being agitated by the press of Great Britain, and the same oft-told story is repeated of "undercutting" by United States manufacturers, to the detriment of home

consumers. The secretary of the British Iron Trade Association says:

The competition of the United States is a two-handed sword, for it cuts to the very dividing asunder of joints and marrow by an admitted capacity to produce more cheaply than European countries, and it also presents the very formidable aspect of threatening to dump a vast surplus on neutral markets on terms that are not competitive at all. To be perfectly candid, this latter is the form of competition of which the people of Europe are the most afraid, because they are most powerless to resist it, and this remark applies more especially to Great Britain, which is a free-trade country. British ironmasters do not so much fear America because of their inability to compete with its manufacturers, as because they live under a different economic system which does not allow them to arrange for the regulation of prices to home consumers, in order that they may export, at any price they can get, a large surplus product. This is done in the United States and in Germany by the system of protection, which guarantees makers in those countries a virtual monopoly of their own markets. We need not fear the rivalry of any country under equal conditions; but when one country offers free markets and an open door and others shut the door with a bang, the conditions are very unequal, indeed.

The placing of contracts with foreign countries, particularly for public works, even with a surety that the time of delivery is much shorter and prices lower for an equal quality, excites comment, and demands are made that preference should be given to productions of the Empire. Canada is sending here a consular officer (the first) with commercial representatives, and is also trying to inaugurate a direct line of steamships.

The United States has not heretofore exported candles to South Africa to any great extent; but a newspaper recently said:

Up to the middle of last year, none of the superior classes of candles, such as those sold in America, were to be met with in South Africa, and no efforts had been made to introduce them. Owing to American consular activity, this deficiency has since been met, heavy consignments having lately been forwarded. We much hope that British manufacturers—who have hitherto enjoyed practically a monopoly in South Africa in this branch of trade—will not allow themselves to be outpaced in this commercial race, as has been the case in other industries.

EXCLUSIVE AGENCIES.

While exclusive agencies may not be the best means of promoting trade in a manufacturing country, in a nonmanufacturing country such agencies are, I maintain, often desirable. Many of the United States manufacturers have what may be called representatives here in the agents of American export commission houses, who introduce the goods, cable the orders, buy in the United States market, and pay not only for the goods, but for insurance, freight, stamps, etc. Such houses ought to be protected, and business men know what that means, without any detailed explanation. The same may be said in regard to what are known as resident agents, exclusive or otherwise—those who go to all the expense and labor to introduce a new article, and spend money for freight, duty, expense of traveling,

and advertising. It is found to be a common practice after goods have been introduced by such an agent—even an exclusive agent—for the manufacturer to fill orders received through another source, without making a price that will warrant reserving a commission for the one who has been the means of placing the goods upon the market; and often the shipment reaches one of the very customers who have been induced through the promoter—if so he may be called—to buy. It has been said, and very truly too, that a foreign merchant who purchases goods at first through an agent is apt to place his second order with export houses through whom he has the habit of importing, and who, he thinks, are in a position to treat him economically; and these houses do not usually order through the exclusive agent, the introducer of the goods, but insist upon dealing direct with the manufacturer. Even if the manufacturer introduces his products through his own salaried men, it may happen that the second order will reach the manufacturer through the importing house. Yet, one of the best moves a manufacturer can make is to send his own men to exploit his goods, even if they are in only one specific line, and charge the expenses of the trip to advertising. The export commission houses would encourage such work, and, while the manufacturer might not get a second order direct from the new customers, orders would come through the export commission house or a resident agent.

Manufacturers must do business with this country in one of the following ways:

(1) They must introduce their goods by a visit from their own salesmen; and, if only one visit is made, they must depend upon the importing agents to furnish later orders.

(2) They must keep their own men here constantly, which would not be economical when only one line is represented.

(3) They must depend upon the very uncertain and unsatisfactory method of advertising, and even then they must not expect so many direct orders from customers as through the commission houses; and, while the commission houses will buy and forward, yet they will naturally consider the trade not so permanent as if steps had been taken as above suggested.

This is all written for the information of manufacturers, in anticipation of a large trade in this country.

AMERICAN LINE OF STEAMERS TO AUSTRALIA.

Reports are circulated that a line of steamers, owned and operated by American capital, will be shortly put on the Australian line from the United States, possibly from San Francisco. This is good news both from a freight and mail standpoint. I note for 1899 that

the total exports from the United States to "British Australia" were $24,142,159, while the total exports to South Africa were $16,638,240, a difference of only $7,503,919; and it is asserted by experts that the increase in exports to South Africa in the future will be more rapid than to Australia. It must be remembered that a large amount of United States exports is sent via Great Britain, for which South Africa gets no credit in the statistical reports.

A line of steamers from New York to South African ports is just as necessary, just as feasible, and would be as profitable as to Australia. I also note that the exports from the United States to ports en route, such as the Canary Islands, French and German Africa, were $720,128 last year. In the list of exports of the United States to foreign countries, South Africa stands thirteenth—not a very bad showing for the "Dark Continent" compared with older and more settled countries. She takes more than Russia, the Argentine Republic, Brazil, and other South American countries, and all Asiatic countries except Japan.

J. G. STOWE,
Consul-General.

CAPE TOWN, *September 28, 1900.*

AMERICAN MEAT IN SOUTH AFRICA.

In a report from Birmingham, England, under date of June 25, 1900,* Consul Halstead quotes the following from the Sydney correspondent of Sell's Commercial Intelligence:

> Advices from South Africa state that the British and colonial troops prefer Australian meat to that imported from America; consequently, large orders have been placed with colonial houses. * * * The American tinned meats are declared to be inferior in quality to the Australian commodity, but Americans in Melbourne and Sydney hint at the possibility of a quantity of low-grade goods having found their way into the South African market. There has certainly been a lot of rubbish sent thither, a matter to which the United States consuls will probably give some attention.

The Sydney correspondent naturally stands up for home enterprise and home industry. Not having heard any complaint of the American tinned meats, the statement above was somewhat startling, and I at once addressed a letter to an army official who is in a position to know, asking for data as to the quantities of American and Australian meat consumed in the country and inquiring if any preference had been expressed by the consumers. He replies as follows:

> The preserved meat, both of Australian and American manufacture, has been found generally to be of good quality, and I have not heard of any marked preference being shown by the troops for one over the other. The only exception has

*ADVANCE SHEETS No. 793 (July 30, 1900); CONSULAR REPORTS No. 240 (September, 1900).

been in the case of ——— brand, which, after examination, was pronounced by the army medical authorities to be good, but to contain an excess of salt. The examination was made in consequence of complaints from army headquarters at Modder River, in February last, of the meat being too salt and causing undue thirst. Great inconvenience has been caused by the meat, in some cases, being canned in 6-pound tins. One-pound or at most 2-pound tins are the largest that are suitable for active service. When a man is carrying a 6-pound tin of meat—*i. e.*, a day's ration for himself and five comrades—and anything happens to separate that man from his comrades, they are liable to lose their ration of meat. If the tin is opened and the contents divided, the meat becomes very unpalatable before being eaten, unless consumed at once.

I have also made inquiries of the representatives of the export commission houses who place orders in the United States, and of jobbers or wholesalers who make bids, give the orders to the export commission houses, and supply the trade and the army. Not one has heard of any fault being found with the quality of the American product. On a recent trip to the Transvaal, I partook of both kinds of tinned meat at stations where the train was delayed, and while I noticed that the American meat was found more frequently than the other, I heard no complaint of either. Two carloads were destroyed by the Boers who attacked the train, and the loss was deplored by the officials, who said it was "too bad to lose so much good meat."

Australian tinned meats are lower in price than ours; they cost $2.20 per dozen 2-pound tins, and the American $2.50.

I would again call attention to the canned-salmon trade of England. Fresh salmon is worth in England 2s. 6d. (60 cents) per pound. Thousands of cans of Alaska salmon are exported from the United States to England, rebranded, and sold as English salmon at an advance of from 6d. to 8d. (12 to 16 cents) per dozen tins. The same may be said of ham. I am informed that nine-tenths of the well-known English hams are of American production, cured in England. Not until the United States manufacturers insist upon their own brands being placed on tins of salmon, and export hams cured to suit foreign taste, will they derive the benefit that is their due.

J. G. STOWE,
Consul-General.

CAPE TOWN, *October 8, 1900.*

UNITED STATES ROLLING STOCK IN NEW ZEALAND.

This government has recently placed with one of our well-known firms an order for sixty-odd passenger coaches at a cost of about $500,000, to be built under the supervision of a railway official who is now en route to the United States. The placing of this order has caused much adverse criticism among the labor parties, but the

government does not appear to be greatly perturbed. The order calls for specially designed and constructed coaches to suit the narrow-gauge railways throughout the colony, and they will be of the latest and most modern pattern, including every up-to-date improvement known to American car builders. It is expected that these coaches will be shipped from New York City in March, 1901.

Mr. Ward, the minister for railways, while in the United States last year, thoroughly studied our railways, coaches, locomotives, and general management, and has, in consequence thereof, inaugurated many reforms in his department.

FRANK DILLINGHAM,

AUCKLAND, *September 12, 1900.* *Consul.*

FREIGHT RATES FROM NEW YORK TO AUSTRALIA.

Consul-General Bray sends from Melbourne, October 6, 1900, clipping from the Melbourne Argus of even date, having reference to the freight rates between the United States and the Australian colonies. Mr. Bray says:

For the past two years, freight rates between New York and the Australian colonies have fluctuated so that the sale of American goods has been materially retarded in these markets. If the manufacturers and exporters of the United States could induce the transportation companies to establish a more uniform rate between New York and Australasia, it would tend to obliterate the uncertainty as to cost of goods that has existed among merchants here. These colonies being such a long distance from the markets of the world, the freight rates are necessarily of considerable importance to the purchaser.

The article reads:

We learn from cable messages received to-day that steamer rates from New York have advanced considerably, the quotations being 30s. ($7.30) per ton for weight and 45s. ($10.93) for measurement, kerosene being charged at 40s. ($9.72)—equal to 3d. (6 cents) per gallon. These rates are calculated to administer a check to the trade that has been growing up between the United States and Australia, affecting in particular low-priced goods. Not only have steamer freights advanced, but it is understood also that it is difficult to procure sufficient sailing vessels for the American-Australian trade, excepting at freights high enough to attract from other services.

While conditions in other parts of the world may warrant a reduction in sailing-vessel tonnage, the time is hardly ripe for it in the Australian trade. As a general rule, the substitution of steam for sail is a good thing; but an important exception is furnished when countries like Australia are far away from consuming markets,

for distance must tell. Unfortunately, the high cost of sailing tonnage militates against the interests of producers of bulky articles like wool and grain. The obvious remedy is such an increase of production for export as will make the oceanic service more attractive to steamer lines and lead, in consequence, to competition for cargo and reduction of freights. The production must not only be large, but also of a varied nature, to secure the fullest freight advantages.

TARIFF ALTERATIONS IN NEW ZEALAND.

Consul Dillingham writes from Auckland, August 23 and September 2, 1900:

The treasurer for this colony, recently "brought down" his annual budget and announced to his confrères in the house of representatives that, because of a series of prosperous years in the colony, he was enabled to announce that there was at the present time a surplus of about $2,945,000 in New Zealand's exchequer, and that he thought it an opportune time to suggest certain alterations in the colony's tariff.

The house of representatives has agreed to the following schedules of duties, which are now in force:

Tea, 2d. (4 cents) the pound.

Currants and raisins, 1d. (2 cents) the pound.

Candles, 1d. (2 cents) the pound.

Cocoa, 3d. (6 cents) the pound.

Coffee, roasted, 3d. (6 cents) the pound.

Stearin, for match making, 0¾d. (1½ cents) the pound.

Paraffin wax, 1d. (2 cents) the pound.

Matches, wax, "Plaid Vestas," in cardboard boxes containing under 100 matches, 1s. (24 cents) the gross of boxes.

Wax, "Pocket Vestas," in tin or other boxes containing under 100 matches, 1s. 4d. (32 cents) the gross of boxes.

Wax, "Sportsman," "Ovals," and "No. 4 tin Vestas," in boxes containing not more than 200 matches, 4s. 6d. ($1.09) the gross of boxes.

Wax matches, other kinds, for every 100 matches or fraction thereof contained in one box, 2s. 3d. (54 cents) the gross of boxes.

Patent medicines, 15 per cent.

Proprietary medicines and medicaments: (1) Bearing the name of the proprietor on label or package; (2) bearing a prefixed name in the possessive case; (3) not otherwise enumerated, prepared by any occult, secret, or art, 15 per cent.

Sarsaparilla, 15 per cent.

Drugs and druggists' sundries and apothecaries' wares, not otherwise enumerated, 15 per cent.

Chemicals not otherwise enumerated, including photographic chemicals and glacial acetic acid (B. P. standard), 15 per cent.

Tinctures and medical spirits of any recognized pharmacopœia, containing 50 per cent proof spirit or less, 15 per cent.

Steam engines and parts thereof, including the boiler, or boilers therefor, imported specially for mining or gold-saving purposes and processes, or for dairying purposes, 5 per cent.

It was resolved that on and after the 29th instant, the duties of customs now charged on the under-mentioned goods, wares, and merchandise shall cease (for the purposes of this schedule, the expression "machinery" shall be deemed not to include steam engines, or parts of steam engines, or steam boilers, land or marine): Kerosene, rice (dressed or undressed), rice (manufactured into starch in bond), salt, coffee (raw), all machinery for agricultural purposes, including chaff cutters, corn crushers, corn shellers, also articles used in manufacturing the same, viz, chaff-cutter knives, tilt rakes, fittings for thrashing mills, forgings for plows, machinery for dairying purposes, machinery of every description for mining purposes, including machinery for dredging; portable engines on four or any greater number of wheels, with boiler of locomotive type, also traction engines, liquid chlorine, cyanide of sodium, engine governors, all bolts and nuts, black or screw nuts, black or finished nuts, blowers (welded and flanged), boiler furnaces, plain or corrugated, chain pulleys, blocks of all descriptions and chains for same, engineers', boilermakers', brass finishers', smiths', and all metal and wood workers' machine and hand tools, steels rams (black or finished), for hydraulic cranes or jiggers.

LABOR LEGISLATION IN NEW ZEALAND.*

In compliance with instruction,† I beg to say that the labor laws of this colony were enacted in the effort to regulate certain conditions affecting employer and employed. Their scope embraces many difficult positions into which the exigencies of modern industrial life have forced those engaged in the trades and handicrafts. The general tendency of the "compulsory conciliation" law, say its supporters, is to ameliorate the position of the worker by preventing social oppression through undue influences and unsatisfactory conditions of sanitation. It will doubtless be found that, with the advance of time, these laws are capable of great improvement and amendment; but they have already, their friends assert, done much to make the lives of operatives of fuller and more healthy growth. Their aim is to check abuses before these obtain formidable dimensions; but that these laws have not prevented abuses is pretty generally admitted, and, inasmuch as the "rosy" side of the question has heretofore been given in reports published in the United States, I deem it advisable to give the other side as well in this report.

The most important of these labor laws in its general significance is that dealing with compulsory arbitration in labor disputes. The "industrial conciliation and arbitration act" of 1894, with its amending act of 1895, is supposed to have been enacted for the purpose of encouraging industrial association and to facilitate the settlement of trade difficulties, but it is very doubtful if it has succeeded in doing this.

Under this act, any society may bring a disputed case before the

* For a previous report on this subject, see CONSULAR REPORTS No. 196 (January, 1897).

† Sent by the Department at the request of a resident of California, to whom ADVANCE SHEETS of the report have been forwarded.

board of conciliation appointed for that district, and, if the board fails to effect a settlement, the dispute may be referred to the court of arbitration, whose award may be enforced in the same manner as an award of the supreme court. The amount, however, for which such an award may be enforced against an association is limited to $2,500 (£500).

Combinations or associations of persons for regulating the relations between masters and masters, or masters and workmen, or workmen and workmen are directed by the "trade union act of 1878."

The manufacturing population in this colony differs somewhat from that in some of the Australasian colonies by its wide dispersion. Wellington, the capital, has heretofore been unable to draw to itself the industrial activity of the other provincial centers; Auckland, Christ Church, and Dunedin vie with it, not only in population, but in commerce. It is claimed by the friends of the compulsory-conciliation act that the general dispersion of industry in the colony requires both a system of supervision and legislative measures of a peculiar character, sufficiently elastic to comprehend many varieties of function, yet rigid enough to crush any apparent abuse.

For some time past, the employers' associations and the industrial association in the south of New Zealand have united and tried to get the Auckland Employers' Association to join them in an effort to resort to the court of appeal, and, finally, to the privy council, to test the validity of the "tyrannous"—as they call it—preference of trade-unionists to nonunionists in the labor market. An important decision was given at Wellington on May 10 last by the court of appeals regarding the award of the arbitration court in labor disputes under the industrial conciliation and arbitration act. It has been the custom for the arbitration court to place a clause in the award compelling employers to give trade-unionists preference for employment in a particular industry. Recently, the master plumbers and gas fitters at Christ Church applied to the supreme court for a mandamus to prevent the arbitration court from giving preference for employment to members of the trades union, in the dispute then under review. Judge Denniston held that the court had a perfect right to give such an award if it thought fit, and dismissed the motion. This decision was appealed against, with the result that the full court has unanimously decided in favor of the judgment. The following selections from the opinions expressed by the several judges are instructive as illustrating official opinion in the interpretation of the law:

In the course of his judgment, the chief justice (Sir Robert Stout) stated that nonunionists were altogether outside the act. They had been excluded. A nonassociated workman had no status under the statute. The statute must be obeyed, however contrary it

might be to what was deemed natural justice. The status of individuals might be changed and the rights of persons affected, and there was no appeal to any other court in New Zealand. Then, the disputes must be in reference to "industrial matters," which were duly defined in the statutes. The definition of "industrial matters" seemed to his honor to include every kind of possible dispute that could arise between an employer and his workman. The act, in effect, abolished "contract" and restored "status." The only way the act could be rendered inoperative was by workmen not associating or not joining any union, for, as had been said, the statute could not deal with unassociated workmen. No doubt the statute, by abolishing "contract" and restoring "status," might be a reversal to a state of things that existed before our industrial era, as Maine, and other jurists, had pointed out. The power of the legislature was sufficient to revert to this prior state. The only question the appeal court had to determine was whether the words of the act were clear enough to show that the court of arbitration had the power claimed for it. In subclause 6, power was given to the court to deal with the status of workmen. He was of opinion that, having this power, the court had power to declare that trade-unionists should have a preference over workmen not belonging to a trade union. In the case of an associated workman, the arbitration court could give the preference, if it chose.

That is to say, so long as some persons will form trade unions, the act will be operative, unless repealed by government, which is not likely as long as trade-unionists can make and unmake parliaments.

Mr. Justice Williams said:

> If the arbitration court had jurisdiction to consider a dispute, it also had jurisdiction to decide it in such a manner as it considered just. The act conferred no status on a workman who was not a member of a union. It was not intended that they should be represented, nor did it contemplate that a decision giving preference to unionists should affect any legal right of nonunionist workmen. The nonunionist had no legal right to demand employment. He could sell his labor at what price and on what terms he chose, provided he could find an employer able and willing to accept his terms; but he had no right to demand that there should be an employer able and willing to accept his terms.

In other words, it would appear that the nonunionist can sell his labor if he can get an employer to run the risk of encountering vexatious and expensive legal proceedings, instituted by some union for engaging him, instead of a unionist. For instance, if A, being a unionist, applies for work, and B, a nonunionist, applies, and the employer, knowing the nonunionist and believing him to be the better workman, engages him, then A could set the law in motion, make the preference to the nonunionist an "industrial dispute," and put the employer to the trouble and expense of trying to justify his

employment of B instead of A. What employer will run that risk? He finds it less expensive to submit to the law and employ the less competent man, whom he does not want, than to fight it. In theory, he need only employ the unionist if he be equally capable; but, as the proving of the equal capability involves a lawsuit, the theory is impracticable.

In connection with this subject of trade and labor unions, one of Auckland's oldest and best-known citizens and business men, who has for years employed hundreds of men in his factory, says:

Any man living in the colony and those who come after us will, I feel sure, think very seriously of the effects likely to ensue if the present suicidal policy of the unions continue. I wish to point out one or two cases. First, the tailors' union. Now, this body says to the masters, "You must only take one apprentice to four journeymen." Now, I propound a question for a life-assurance actuary or the trade unions, viz: Supposing Auckland employs 60 journeymen tailors now, with 15 apprentices. How many of these 15 may live to complete their indentures? How many would stick to the trade? How many would be worth their salt? Say, that during the next twenty years there should be 50 apprentices indentured, how many in the above ratio would complete their indentures? It appears to me that, instead of increasing in numbers pro rata with natural increase of population, they would be diminishing, and, instead of handmade clothes, it will all have to be done by machinery, and the journeyman tailor will be a dream of the past. I am not in a position to say the number of journeymen engineers there are in the workshops of Auckland, but I understand their union says, "You shall only have one apprentice to three journeymen." The same reasoning applies as in the tailors' case, but with a much graver result. With the engineers it would not be so bad if it applied only to the workshops, and even there it is bad enough; but the workshops are the nursery from which you expect to rear all the engineers required for steam vessels and all other engines scattered all over the country. This is really alarming. Our machinery will have to stop if this goes on, or we will have to import engineers from Germany, Japan, etc., to keep our wheels turning.

About a year ago, the Hon. James W. Bucklin, a member of the Colorado senate, was appointed by that body to visit Australasia to study its labor and school laws. While in Auckland, he was the guest of George Fowlds, esq., a member of parliament, who is an avowed, out-and-out single taxer. After thoroughly investigating the labor laws in the colonies, Senator Bucklin wrote to F. G. Ewington, esq., of Auckland, as follows:

I became convinced that the evident prosperity of New Zealand was not owing in any material degree, if at all, to your so-called "labor laws," such as arbitration, early-closing, eight-hour, and other restrictive legislation.

In conclusion, I quote from a recent article in the Herald:

The ministers and a majority of southern members have again succeeded in administering a blow to Auckland. It seems that in the south the trades unions have succeeded in tying up the clothing trade by a "log," or plan of work, and scale of payment, which enhances the price of clothing, owing to the use of antiquated processes and methods. It is impossible, under the southern log, to

adopt the best modes of work. In Auckland, on the other hand, the log of the clothing trade had been differently framed, and was constructed so as to fit in with the most advanced methods of working. The southern manufacturers were tied and helpless, and, as they could not make any improvements, they considered that the next best thing was to bring the Auckland methods back to theirs. The superiority of Auckland methods was telling, and ready-made clothing could be sent from Auckland and sold at a profit in Dunedin and Christ Church and Wellington. This became so patent that Mr. Justice Martin, who presides over the arbitration court, wrote an official letter to the government on the subject, pointing out that, unless something were done, Auckland would become the manufacturing center of the colony, and would absorb a great part of the trade of the southern cities. In the discussion in the house, Mr. Bollard referred to this letter as being quite unjustifiable. If Auckland can become the chief manufacturing center by fair means and by natural advantages, surely the government has no right to step in and destroy these.

But this is just what the government has done, by the assistance of the southern members. They have added a clause to the conciliation and arbitration bill, giving the court "power to extend any award to any employer in the colony not then bound thereby or party thereto." That is to say, that if an award is made under the Dunedin log in the clothing trade, the decision shall be binding in Auckland, although, owing to the different construction of the logs, it may be difficult to apply it. The logical result would be to abolish the improved machinery in use in Auckland and to set on foot again the antiquated methods which have been fastened on the south by the log in use there and sanctioned and confirmed by the statute.

At present, the colony is divided into districts for the administration of the arbitration act, and this arrangement was adopted in order that local circumstances and methods might be taken into account. The amendment to the bill now before the house, enforced by the premier at the dictation of southern members, virtually annuls this. The prospect or chance of Auckland becoming the manufacturing center of the colony was apparently appalling to the ministers, and they have adopted this means to stop any prospect of that. No advantage of better machinery and better methods is to be allowed to tell.

FRANK DILLINGHAM,

AUCKLAND, *September 24, 1900.* *Consul.*

TRADE OPENINGS IN GUATEMALA.

After a careful investigation among the importers of Guatemala, I find that cheap and flashy articles attract the buyer rather than those more expensive but of quiet coloring. The articles of hose and underwear imported for local use are of the cheapest grade and much inferior to those of American manufacture. There is, in my judgment, a market here for American haberdashery, and I am certain that its introduction into this Republic will develop a good trade in this line of goods. It is quite impossible to find a shirt, collar, or cuff of American make in all Guatemala, and the same may be said of other articles of wearing apparel.

Observation leads me to believe that our cheaper grade of goods is much superior to the cheaper grades introduced into this country

from England, France, and Germany. For the past few months, I have endeavored to ascertain the reason for the monopoly of the import trade by England, France, and Germany. I find that all these countries have resident salesmen here, with display rooms in which to show their goods. This affords the dealers an opportunity to select from numberless varieties of fabric and qualities, and by this means cable orders can be sent, and the goods arrive in a reasonably short time. The representatives of the foreign houses usually make their headquarters in this city, having their warehouses stocked to supply the immediate wants of the trade. When business is quiet here, they make trips into Salvador, Honduras, and Costa Rica, carrying with them all necessary samples and supplying from their headquarters at Guatemala City. This resident system is also a protection to their houses; for, if a firm has financial difficulties, they are on the spot to protect their principals and usually get their accounts in money or goods. A recent failure here will demonstrate the advantage of having a resident representative. A house doing a large business liquidated. The foreign agents had previously become acquainted with the financial difficulties of the firm and were able to step in at the right time. I am informed that the foreign houses were fully protected, while the American creditors had to take what was left. These acquired advantages must, of course, influence the trade, and if our manufacturers desire to compete, they must adopt this system. I reiterate that a general display room for United States goods in all these Central American countries would bring to us the bulk of the trade now being monopolized by European houses.

There seems to be an opening here for American shoes, and I think a good market awaits them. The ready-made shoes are imported principally from France and Germany and are of a style and quality much inferior to our products at the same price. Shoes made to order have in them a poor quality of leather. The leather is imported from Germany and England. The sole leather is made here, although some shoemakers prefer the Nicaragua sole leather, and much is imported from that Republic.

I am informed that the Pacific Navigation Company has under consideration the idea of extending its steamship line to San Francisco; this will open trade communication direct between San Francisco and the ports of Chile and Ecuador.

A little study of the demands of the trade on the part of the American manufacturer, and a desire to meet the conditions to insure a safe delivery of goods, will win this market for American products.

JAMES C. MCNALLY,
Consul-General.

GUATEMALA, *October 18, 1900.*

RAILWAYS IN NICARAGUA.

Consul Sorsby writes from San Juan del Norte, October 9, 1900:

It appears that the Nicaraguan Government has temporarily abandoned the construction of the proposed railroad from San Ubaldo, on Lake Nicaragua, to Rama, near Bluefields, on the Rama River, and that, instead, it is now the purpose of the Government to build a line from Managua to La Paz, about 37 miles in length, and connecting the two divisions of the present Government railway system, thus obviating the present costly and vexatious system of transferring by steamer across Lake Managua.

RAILWAY CONCESSION.

The Nicaragua Government has given a Mr. Freeman, of New York, a concession to construct a railroad from the Wawa River, on the Atlantic coast, in the old Mosquito reservation, to Matagalpa, and to connect at La Paz or some other convenient point on the Pacific coast with the national railway system from Granada to Corinto. The general terms of the concession are as follows: Fifty thousand dollars gold must be deposited by the contractor within six months from September, 1900; work must be commenced within one year, and the entire line must be completed within four years thereafter, though liberal provisions are made to protect the contractor in the event of unavoidable delay or failure to complete it within the stated period. The contractor is also obliged to dredge or make a harbor or channel at Wawa River, to establish a wharf, and to run steamers on the coast with New Orleans connections.

The Government will guarantee 6 per cent interest on $10,000 gold bonds per mile for twenty-five years, will grant 4 square miles of land in alternate lots along the railway route, and also grants the privilege to select at will and to purchase 100,000 manzanas* of public land at the prevailing Government price.

The road, if completed, will be about 250 miles in length and will pass through the Prinzapulca and other well-known mining districts, through fine cattle, agricultural, and timber lands, and also through the principal coffee district (Matagalpa) of the country.

*1 manzana=1.727 acres.

NOTES.

Special Consular Reports in Germany.—Vice-Consul-General Hanauer reports from Frankfort, November 2, 1900:

The German central bureau for preparing commercial treaties directs the attention of the business community to a new method lately adopted by the German Government in issuing, "after the mode of the United States Department of State," special consular reports upon certain products, trade matters, or economical questions; which reports—in reply to a line of interrogatories or specified instructions—are prepared by German consuls and then published and gratuitously distributed by the German Government. Already, two such special reports have been issued, one on the "Condition of the carbide and acetylene industry in Europe, the United States, and Argentina," and the other on "Foreign markets for German shoes." The central bureau and the German press, in welcoming this new move of their Government in the interests of German industries, say that special reports have rendered magnificent service to the export trade of the United States.

New Method of Laying Tramways in Germany.—Under date of October 23, 1900, Consul Hughes, of Coburg, writes as follows:

Various attempts have been made in Germany to devise a means whereby the destructive influence exerted by the passage of heavy electric tram cars upon asphalt pavements may be counteracted. Hitherto, these endeavors have been without definite result, but much has been said lately in praise of a system which is shortly to be subjected to a practical test in Berlin. Contrary to ordinary practice, in which the tram rails are laid immediately upon a foundation of concrete and in direct contact with the superimposed asphalt, the new method consists in laying the rails upon a bed of coarse gravel and running a line of hard-wood blocks along either side. Experience has shown that ordinary pavements, with gravel and stone foundations in place of concrete, offer the greatest resistance to the influence of electric cars. It is assumed that the gravel

or stone allows the rails more play, which is advantageous in that, despite great care in their manufacture, it is impossible to insure exact uniformity in the gauge of the cars. The new method is also relied upon to reduce the noise caused by the cars running over the lines.

Shipbuilding in Germany.—Consul Winter reports from Annaberg, October 2, 1900:

During the past ten years, shipbuilding in Germany has become a great industry. Old wharves have been torn away and new and larger ones constructed in their place. The present capacity of all the wharves does not meet the demands of the German merchant marine. Many orders must still be placed in foreign countries. At present, twenty-two ships are being built in England for Hamburg alone. During the first half of the present year, the dock owners and shipbuilders of Stettin, Kiel, Flensburg, and Bremen have increased their capital stock, on the whole, by $1,378,000. Many new enterprises are being planned. In the neighborhood of Nordenham, on the Lower Wesel, large wharves are being projected. A wharf for Stralsund is being planned which will cost nearly $1,000,000. It is also reported that a German-Belgian syndicate will build a wharf in Antwerp under the auspices of the Bremen Vulcan Works. The German merchant marine now numbers 1,209 steamers, of 2,159,919 tons.

German Merchant Flag Salute.—Consul Kehl sends from Stettin, November 2, 1900, translation of the rules adopted November 1 by the North German Lloyd, Hamburg-American, and other German steamship lines as to a flag salute, to be exchanged by their steamers, as follows:

As soon as a German vessel [of the lines named] is sighted the national flag is to be immediately hoisted on the stern flagstaff, regardless of any formalities. Salutes are to be exchanged until side lights are displayed.

The vessel obliged to make the first salute is:

(*a*) The ship which overtakes another while under way.

(*b*) The ship passing a vessel at anchor or otherwise lying still.

(*c*) The ship from Europe bound "out."

(*d*) In all other cases, that ship which has the other vessel to her starboard.

The ship which is bound to salute first should dip her flag as soon as the approaching vessel is in the bearing of two points forward from abeam; at all events, not later. The flag is to remain dipped until the salute is returned, and then to be hoisted again. After the vessels have passed each other, the ship which was bound to salute first should take in her flag first, unless for special reasons it should remain hoisted.

Indigo in Germany.—Vice-Consul-General Hanauer, of Frankfort, under date of October 19, 1900, says:

Artificially produced indigo is now better in quality, cheaper in price, and consequently much more popular than the natural article. During the first half of this year, Germany imported but 437 metric tons,* against 804 tons of natural indigo imported during the same period of 1899, equivalent to a decrease of over 45 per cent. Sixty-eight per cent of this imported indigo came from the East Indies. Germany's exports of indigo (almost entirely composed of the artificial article) during the first six months of 1900 reached 947½ metric tons—74½ per cent in excess of those of the same period in the preceding year. Of this artificial indigo, the United States took 29.9 per cent; Austria-Hungary, 14.7 per cent; England, 10.4 per cent; etc.

Utilization of Furnace Gas in Germany.—Vice-Consul-General Hanauer, of Frankfort, writes, November 3, 1900, as follows:

On October 30, twenty-five representatives of the largest iron works in France and Belgium visited the Hörde Mining and Rolling Mills Association, at Hörde, near Dortmund, Prussia, to inspect the electrical central station for utilizing the gas coming from the mouths of furnaces. This new method is considered one of the wonders of modern technics. The plant, when fully completed, will have a force of 6,400 horsepower. At present, three twin motors of the Oechelhaüser system are run by this furnace gas to produce an electric current for supplying power and light for the Hermann rolling mills. A fourth motor of 600 horsepower and four others of 1,000 horsepower each are now in process of construction to serve like purposes.

Russian Licenses for Traveling Agents.—Mr. Peirce, chargé at St. Petersburg, sends under date of September 29, 1900, translation of a note from the Russian Ministry for Foreign Affairs, the substance of which follows:

A notice of the council of the Empire, sanctioned by the Emperor on June 5, 1900, which is to take effect from January 1, 1901, authorizes commercial firms and industrial enterprises, both Russian and foreign, which do not pay less than 150 rubles ($77.25) as impost on the industry, to avail themselves of traveling agents in Russia. The traveling agents will be held, as formerly, to pay a personal tax of 50 rubles ($25.75) per annum. By the time this law will take effect, the Ministry of Finance will elaborate detailed rules

* Of 2,204.6 pounds.

with regard to the delivery of the industrial license, as well as for the payment of the supplementary taxes by foreign firms and by their traveling agents. Copies of the rules will be sent the United States embassy at St. Petersburg.

Russian Freight Rates on German Iron.—Writing from Frankfort under date of November 3, 1900, Vice-Consul-General Hanauer says:

According to German press reports, negotiations are now pending between the Russian railroads and the Prussian governmental railroads to carry into execution a project of the Russian Minister of Finance, which aims to obtain for Russian petroleum lower transportation charges on Prussian railroads. The Russian roads offer to carry the oil at the ridiculously low rate of one one-hundredth of a kopeck (half a cent) per pood (36¼ pounds) per verst (two-thirds of a mile). Germany is willing to carry on her roads Russian oil at one-sixteenth of a kopeck per pood per verst, provided Russia will reciprocate by giving low railway rates for German iron. This has been acceded to, and the freight schedules are now being made out on this basis. The differential rates accorded by Russia comprise ironware and manufactured iron, as well as pig iron. Our American exporters would do well to examine closely into this matter, which will discriminate against our exports of rails, locomotives, machinery, etc., to Russia.

Coal Freight Rates.—Consul-General Holloway writes from St. Petersburg, October 8, 1900, that the Minister of Finance has given notice that an order will be issued October 1–14 placing an additional duty on imported coal.

Under date of October 23, Mr. Holloway corrects the above. It appears that the notice was intended to apply to the transportation of coal on the Government railroads.

American Coal for Russia.—Consul Bartleman, of Geneva, on November 2, 1900, sends the following clipping from the London Daily Mail of even date:

Coal is so scarce in Russia and there is so little to be had near at hand that America is being called on to supply the deficit.

The demand for coal and fuel of all kinds, says the British commercial agent at St. Petersburg, still increases every day, and prices rise accordingly. Foreign coal may be imported free until July next, and there seems every likelihood of an

indefinite prolongation of this free trade in coal. The Government will also grant loans to new colliery companies.

In July last the British steamer *Accomac* landed at Cronstadt the first cargo of coal ever landed there—3,074 tons of New River steam coal shipped by the Chesapeake and Ohio Coal Agency Company. The use of peat fuel is occupying official attention.

New Railway Service between Moscow and Baku.—Vice-Consul Smith writes from Moscow, November 6, 1900, as follows:

A special express train running between Moscow and Baku made its first trip on the 28th of October last, leaving per the Moscow-Kasan Railway station. The train consists of one first-class car, two second-class cars, and one baggage car. These cars are constructed, according to the most recent models, on Pullman trucks, and are fitted with the latest improvements. They are of Russian make and were built at the shops of the Vladikavkaz Railway. Special attention has been given to the comfort of the passengers. The average speed of this train will be 58 versts per hour, which is equal to 40 miles.

Cotton Crop of Central Asia.—Writing under date of November 6, 1900, Vice-Consul Smith, of Moscow, states that the cotton crop of central Asia, according to calculations based upon the area sown, is expected to be excellent this year. In many instances, as for example in the Fergansky districts, the area of the sown cotton fields has increased over 30 per cent, and in some of the other districts even more. Last year's demand for cotton amounted approximately to 15,000,000 poods (240,395 tons), of which about 6,000,000 poods (96,774 tons) came from central Asia. This year's crop is expected to be between 7,000,000 and 8,000,000 poods, or enough to meet half of the general demand. The remaining cotton required for manufacturing purposes in Russia will have to be imported.

Abolition of Free Ports in Eastern Siberia.—Commercial Agent Greener reports from Vladivostock, October 10, 1900, that according to a recent decree all foreign merchandise coming into the ports at the mouth of the Amur River and into the ports south of it, as well as that coming overland from abroad, shall, from January 1–14, 1901, pay the duty now levied in European Russia. An exemption is allowed on all Chinese products brought by land across the boundary, with the exception of tea and alcoholic liquors. The following articles are to remain free of duty: Cereals in grain, potatoes, beans, vegetables, fruits, Chinese nuts, bean oil, beef, salt,

cattle, and the like; also, building and paving stones, clay, bricks, potter tubes, coal, belting for machinery, metal sieves, sulphur, borax, cast iron, iron, boilers, cisterns, dynamo-electrical apparatus, agricultural machines, and the like; also, carbolic acid and all other apothecary drugs.

Harvesting Machines in India.—Consul-General Patterson writes from Calcutta, October 10, 1900:

Answering inquiries of a United States company* regarding the use of harvesting machinery in cutting grass and grain in India, I have to say that India is not a hay-producing country. The grass is cut and used green for horses, but is not cured as hay. The common fodder for cattle is rice straw. In this part of India (Bengal), rice and jute are the principal crops, and the quantity of grass grown is comparatively small. Wheat is extensively grown in the western part of India, for which Bombay is the principal shipping port. The United States consul at Bombay can give the desired information from there. For further information from here, I would advise correspondence with the following-named firms in Calcutta, who are dealers in agricultural machinery and tools: Messrs. T. E. Thomson & Co., Limited; Jessop & Co., Limited; W. Leslie & Co.

Quinine Auction in Batavia.—Vice-Consul Rairden writes from Batavia, September 29, 1900:

The fifth public auction sale of Java quinine was held at the Merchants' Exchange in this city on the 26th instant, and the following were the prices realized:

(1) Editio I, 1,318 kilograms (2,906 pounds) of quinine in lots of 2 cases containing 4 tins, 22.68 kilograms (50 pounds); sold at 25 and 25.95 florins ($10.05 and $10.43) per kilogram (2.2046 pounds).

(2) Editio II, 750 kilograms (1,653 pounds) of quinine packed in cases and tins at purchaser's option, in lots of not more than 25 kilograms (55 pounds) and not less than 22.68 kilograms; sold at 25.25 and 25.50 florins ($10.15 and $10.25) per kilogram.

(3) Editio III, 120 kilograms (265 pounds) of quinine in lots of 1 case containing 24 kilograms; bids to 25 florins ($10.05), but not sold.

The average price realized, 25.46 florins ($10.23), is equivalent to 0.10½ florin (4.2 cents) unit price for the bark at Amsterdam. The next auction sale is to be held on October 31, 1900.

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*ADVANCE SHEETS of the report have been sent the company.

German Steamship Subsidies to the East.—The secretary of embassy at Berlin, Mr. Jackson, under date of October 23, 1900, sends copy of the Reichanzeiger of October 22, containing an amendment to the contract between the Government and the North German Lloyd Company for the maintenance of steamship communication with eastern Asia and Australia, as follows:

The following paragraph is added to article 1 of the contract for the maintenance of the German mail steamship communication with eastern Asia and Australia:

In place of the additional line, provided for under article 4, from Singapore to the New Guinea protectorate and back, one or more lines shall start from ports on the Chinese-Japanese main line and run to the island groups of the German South Sea protectorate; it being stipulated that the total service rendered by these additional lines shall not be less than the total service of the additional line provided for under article 4.

American Shoes in the Levant.—Vice-Consul-General Hanauer, writing from Frankfort under date of November 5, 1900, states that German papers, in calling attention to the growing American trade in the Levant, make use of the following language:

Lately, two large firms in Constantinople have for the first time received extensive shipments of American shoes. This shows that the persistent efforts of the Americans to gain a footing in the levantine markets have achieved success. Since the establishment of a direct steamship line between the United States and the Levant, American trade with Turkey has made marked progress. European manufacturers would do well to keep their eyes on the actions of the Americans in these markets.

Austrian Chambers of Commerce Abroad.—Vice-Consul-General Hanauer, of Frankfort, under date of October 11, 1900, notes that a petition is under consideration by the Austrian Government to establish a chamber of commerce at Breslau, Germany, and another at Moscow, Russia. In recommending the latter, the commercial attaché to the Austro-Hungarian consulate-general at Moscow says:

This consulate-general expects therefrom promising results. Large dealers from all parts of this vast Empire come at least once a year to Moscow (many more frequently) to make purchases; all Russian manufacturers of note maintain offices here or are represented by agents.

Sawdust as Fuel in Austria.—Consul Hughes, of Coburg, October 6, 1900, reports:

In Austria, where everything in the shape of fuel is being carefully investigated, sawdust is impregnated with a mixture of tarry substances and heated to the proper temperature; it is then passed over a plate of iron heated by steam, from which a screw conveyor

takes it to a press, where it is compressed into briquettes of the required size. The press turns out nineteen per minute, weighing two-fifths of a pound each, and measuring 6 by 2½ by 1½ inches. The caloric power is about the same as that of lignite, with but 4 per cent of ash. One factory produced last year over 7,000,000 briquettes, costing about 16 cents per thousand, and selling at from 95 cents to $1.

Baggage in Greece.—Consul McGinley reports from Athens, October 20, 1900:

The Greek health authorities require that all trunks, packages, etc., the personal baggage of travelers, when unaccompanied by their owners, must, on arrival at any port in Greece, be accompanied by a certificate of origin or a certificate from the health authorities of the port from which the baggage was shipped to Greece. As ignorance of the foregoing rule has caused many American travelers delay and trouble in regaining possession of such baggage, and as thousands of Americans annually visit Athens and other parts of Greece, this information should be published widely, in order that they may come prepared with the necessary certificates to release their baggage without delay.

Tunnel from Gibraltar to Morocco.—Consul Monaghan, of Chemnitz, under date of October 13, 1900, informs the Department that a Parisian engineer has recently finished a plan according to which the Spanish railroads terminating in Gibraltar will be connected, by means of a tunnel crossing under the Strait of Gibraltar, with the railroad lines of Morocco. Several of the men interested in the scheme are now in Morocco trying to obtain permission to build a railroad in that place. Technically, the plan is not impossible, as it is merely a question of boring through rock. Several plans of this nature—for instance, the tunnel from Calais to Dover, which fell through owing to some opposition, the plan to bridge the Bosphorus, etc.—have recently gone to pieces, and it now remains to be seen, says Mr. Monaghan, how far this scheme will be carried out and to what extent it will receive the support of capitalists.

Spanish Customs Regulations.—The Department has received a note from the Spanish legation, dated Washington, September 22, 1900, reading, in part:

In view of the vexatious complaints against the Spanish customs arising from incorrect accounts presented to their employers by custom-house brokers and agents

touching duties paid into the said customs, the Minister of the Treasury has directed that the right conceded under article 50 of the customs regulations to custom-house brokers and agents to have the accounts rendered to their employers touching duties paid into the customs under any head whatsoever visaed by the proper bureau shall be extended to the masters and owners of vessels in regard to accounts presented by their consignees or by custom-house agents.

New Cable between Netherlands and England.—Consul Listoe, of Rotterdam, under date of October 23, 1900, sends the following:

The laying of a third telegraph cable between the Netherlands and England, from Zandvoort to Lowestoft, was commenced on the 8th of October last. The cable comprises four wires, which will extend all the way from London to Rotterdam and Amsterdam. Telegraphing over these wires will be done by means of the Hughes apparatuses, and at busy times with duplex Hughes apparatuses. The cost of construction of the cable will be borne by both countries. The cable, which will be ready for use in a few days, will greatly accelerate the telegraph traffic between the Netherlands and England. The new connection will also expedite the receipt of American cablegrams via London, as one of the wires will be immediately connected with the cables of the Anglo-American Telegraph Company at London, thus making cabling to the United States possible without the intervention of the London office.

Foot and Mouth Disease in France.—Consul Tourgée, of Bordeaux, under date of November 8, 1900, informs the Department that the "foot and mouth disease" prevails to such an extent in the Departments of Charente, Charente-Inférieure, Deux Sèvres, and Landes that the prefect of the Department of Gironde issued on August 22, 1900, a decree (approved by the Ministry August 30) forbidding the introduction of neat cattle, sheep, hogs, and goats from said Departments into the Gironde. There is no exportation of these animals from this port to the United States, says the consul, but hides are exported in considerable quantities. Goatskins and dried calfskins go to the United States, especially via Liverpool, London, and Antwerp.

Belgian Canadian Pulp Company.—Consul Roosevelt writes from Brussels, November 8, 1900:

Belgian capitalists have recently organized a company in this city, to be known as the "Belgian Canadian Pulp Company," for the purpose, as its name indicates, of manufacturing wood pulp.

The capital is fixed at 3,000,000 francs ($579,000), represented by 6,000 bonds of 500 francs' ($96.50) value per bond. The company has secured a grant from the Canadian Government for the use of 743 square miles of forest land located near the River St. Maurice and its tributaries. An agreement has also been concluded with the Shawinigan Water and Power Company, as well as with an engineer, for plans and execution of works for the company.

Packing for Tropical Countries.—Consul Hughes sends the following from Coburg, under date of October 3, 1900:

The Indian Import and Export Trades Journal calls the attention of shippers to the East Indies and other tropical countries to the proper methods of packing goods for shipment. It says:

The effect of heavy rain in the Tropics is to produce a dampness in the air quite unknown in Europe, and this is destructive to many articles of European manufacture. Mildew attacks textile goods, leather, books, and stationery; while arms, cutlery, and metal work require constant attention to preserve them. No merchandise that is liable to injury from heat can be long stored in India without deterioration. The dampness of the air is such that a piece of woven fabric made and measured for length in this country will have different lengths in different parts of India. In Bombay, for example, closely woven unsized calico exposed in the air in the shade in February, which is the dryest month of the year, varies as much as 3 per cent in length from day to day. Nothing will keep steel or iron articles so well as lining the cases with bay wood or other absorbent timber which has been well painted with paraffin wax while hot.

This applies just as well to goods shipped from the United States to Central and South America, the West Indies, and Mexico; the writer has often seen beautiful and costly goods shipped to these countries ruined by careless packing.

Equivalence of Gold and Silver Money in Peru.—The secretary of legation at Lima, Mr. Neill, under date of October 13, 1900, transmits copy and translation of a new monetary law issued on the same day by the Peruvian Government. The importance of this measure at the present time, says Mr. Neill, consists in the fact that the gradual rise in the value of silver, which has been going on during the last few months, may continue until 10 soles exceed the value of a pound sterling; the approved project tends to maintain the equivalent value between the national silver and gold moneys, as 10 soles silver to £1 Peruvian gold coin. The text of the law follows:

ARTICLE 1. The Peruvian pound is legal tender of full cancellatory power, equivalent to 10 soles silver.

ART. 2. The coining of half pounds is herewith authorized, subject to the conditions established by the Executive.

ART 3. The English pound sterling has the same value as the Peruvian gold pound, until otherwise decided by Congress.

Coffee Shipments from Guatemala.—Under date of October 30, 1900, Consul-General McNally, of Guatemala, states:

The delay in shipping coffee from this Republic is caused by the poor condition of the roads, owing to the heavy rains, which prevents transportation to the ports. While this reason is the one generally advanced, I am of the opinion that the "finqueros" are holding back with the hope that the duty of 6 pesos ($2.70, at present rate of exchange) a quintal (100 pounds) will be remitted. Coffee shippers in Guatemala are exceedingly worked up on account of this new export duty, saying that the exchange has dropped about 200 points, and therefore the 6 pesos means a greater gold outlay by 33⅓ per cent than they would have had to pay when the decree fixing the duty was promulgated; besides this, the coffee quotations abroad are considerably lower than was expected. As the largest coffee fincas are owned and worked by Germans, the hardship will affect them most. There seems to be little hope of a revocation of the decree fixing the export duty above mentioned.

Dry Goods in Guatemala.—Consul-General McNally, of Guatemala, writes under date of November 2, 1900, as follows:

I am informed by many local dealers in dry goods that United States drills, prints, and shirtings are in demand and are being constantly called for. Raw and bleached cotton yarns, packed with care, would also find a ready market. I believe that ready-made clothing for men would prove a good item of export. The people seem anxious to buy American goods when they can be found. Although there are many Americans in business here, their goods are imported from Europe and are of the cheapest and most shoddy quality. There is an excellent opportunity for American business men who will cater to the wants of the people.

Exposition in Minas Geraes.—Minister Bryan, of Petropolis, under date of September 29, 1900, informs the Department that early next year there will be inaugurated at Belle Horizonte, the capital of Minas Geraes, under government and municipal support, a perma-

nent exposition of the products and manufactures of that vast State, whose population now exceeds four millions and whose industries—mineral and agricultural—are being actively developed. Mr. Bryan adds:

In 1899, the gold product of the State of Minas exceeded $3,000,000, an increase of $1,000,000 in value over 1898. Several citizens of Minas Geraes who are interested in promoting American enterprises have suggested, and are willing to undertake, the erection of a pavilion in which to exhibit machinery from our country at this forthcoming exposition. I respectfully recommend that our manufacturers of agricultural, dairy, electrical, and mining appliances, who desire to avail themselves of an inexpensive opportunity to exhibit their improved machinery, communicate on this subject with the United States consulate-general in Rio de Janeiro.

German Communication with Northern Brazil.—Consul Baehr sends the following from Magdeburg, under date of September 26, 1900:

The Hamburg-American Line recently sent its steamship *Canadia* to Manaos, which is situated 900 English miles up the Amazon River in the immense province of Amazonas. On August 15, this steamship, after traveling uninterruptedly up the Amazon for four and a half days, reached Manaos, being the first German vessel to enter that port. Manaos is constantly growing and ships much gum and cocao. A few years ago, it had only 6,000 inhabitants; now it has 35,000.

United States Coal in Brazil.—Minister Bryan sends from Petropolis, September 11, 1900, translation of a letter from Dr. Alcides Medrade, a prominent citizen of Minas Geraes, in which he refers to a conversation with State officials as to the advisability of importing United States coal for the establishments under the control of the Ministries of Industry and the Navy. The ministers, says Dr. Alcides, showed themselves interested in the matter and will make the experiment.

Brazilian Demand for Coal.—A cablegram has been received by the Department from Minister Bryan, dated Rio de Janeiro, October 4, 1900, to the effect that the Brazilian Government has advertised for bids for 120,000 tons of coal, to be opened Novem-

ber 30. United States coal is mentioned in the advertisement. A sample of 2 tons will be required early in November. A copy of the last contract made by Brazil for coal (in December, 1899) was printed in Special Consular Reports Foreign Markets for American Coal, page 257.

Transportation Facilities for Salvador.—Consul Jenkins writes from San Salvador, November 5, 1900:

It is officially announced that the Pacific Steam Navigation and South American Steamship Company will take freight and passengers for Europe and New York via the Isthmus of Panama, beginning at Acajutla on the 17th of December, 1900. It is also rumored that United States capital has secured the control of the Pacific Mail Steamship Company, and it is hoped that the change will be in the interests of our commerce.

Conditions in Honduras.—Vice-Consul Woodville writes from Utilla, October 4, 1900:

Trade is improving, quarantine restrictions, to a certain extent, having been raised. Two ships have loaded within the past two days with cocoanuts, and there are upwards of 500,000 now in warehouses, ready to ship. Importations of United States goods are greatly on the increase, and the outlook for the next three months is very satisfactory.

Fruit Exports from Honduras.—Consul Johnston reports from Utilla, November 1, 1900:

The shipment of cocoanuts for the last month has been large, on account of the high prices ($23.85 gold per thousand). The crop is fully up to the average. Bananas for the last year have been raised in large quantities, and have sold for 50 centavos (22½ cents gold) a bunch. Owing to the good prices obtained for the products of the country, the import trade is on the increase, and traveling men everywhere report substantial orders and good business.

Agricultural Machinery in Chile.—Consul Schumann sends the following from Mainz, dated October 17, 1900:

A German trade journal says that the Government of Chile has placed $20,000 at the disposal of the National Agricultural Society for the purchase of agricultural machinery. The president of the

society is commissioned to make the purchases. Correspondence and catalogues (in the Spanish language) should be addressed to Presidente de la Sociedad Nacional de Agricultura, Santiago, Chile.

Colombian Duties on Matches.—Consul-General Beaupré telegraphs from Bogotá, October 27, 1900, that, according to a decree of September 29, the import duties on wood matches will hereafter be 90 cents in Colombian money (39.4 cents gold)* per kilogram, gross weight; on wax matches, $1.87½ (82 cents gold).

Passenger Traffic to Guatemala.—Under date of October 12, 1900, Consul-General McNally, of Guatemala, reports that after the 11th instant, the United Fruit Company's boats leaving Puerto Barrios and Livingston will take passengers as usual, subject to baggage fumigation at port of embarkation.

Guatemalan Export Dues on Bananas.—Consul-General McNally sends from Guatemala, September 28, 1900, copy of a decree of September 5, which reads:

The exportation of fresh fruit from the country is free of all fiscal duty; this changes article 1 of Government decree No. 603, which placed a duty of 10 cents on each bunch of bananas exported.

Austrian Commercial Agents in Australia.—Consul-General Bray, of Melbourne, under date of October 2, 1900, sends a clipping from the Argus, of that city, reading as follows:

A letter has been received by the premier, through the lieutenant-governor, from the Colonial Office, stating that the Austrian Government is sending two commercial reporters to Australia to inquire into the openings which exist for further trade between that country and these colonies. The reporters are also to visit the Cape, India, and Japan.

Exports of Wood from Victoria.—Consul-General Bray, of Melbourne, under date of October 22, 1900, says:

A contract has been placed in Victoria by the War Department of England for 2,000 tons of firewood for the use of troops in China. This quantity is the first that has been ordered from Victoria, but already several large consignments amounting, it is believed, to

* The value of the Colombian peso was estimated by the United States Mint, July 1, 1900, at 43.8 cents.

from 4,000 tons to 5,000 tons have been dispatched from New South Wales. The 2,000 tons are to be shipped in about two weeks, and another consignment of 1,000 tons is to follow several weeks afterwards.

French Annexations in the Pacific.—Consul Doty writes from Tahiti, October 1, 1900, that on the 25th of August the islands of Kumter and Kimatara were annexed by France. These islands, he adds, were placed under the French protectorate in March, 1889, and are of small commercial importance.

Grain Exports from Russia.—Under date of November 6, 1900, Vice-Consul Smith, of Moscow, sends the following:

From reports which have been given out by the custom-house department, the total exports of different grains from January 1 to November 1 of this year amounted to 271,715 poods (4,382 tons), an increase of 876 tons over that of last year, which amounted to ony 217,414 poods (3,506 tons).

Russian Demand for Phonographs.—The Bureau of Foreign Commerce has received a letter from Mr. Emil Rothstein, of Rostoff on Don, dated October 21, 1900, requesting the names of manufacturers of phonographs and gramophones. Mr. Rothstein wishes to deal direct with American firms. Not desiring to discriminate between dealers, the Bureau takes this method of bringing the matter to the attention of those interested. The telegraphic address given is, Rothstein, Rostovdon.

British Inquiry for Steel.—Consul Marshal Halstead writes from Birmingham, October 18, 1900, that he is in receipt of a communication from a steel-manufacturing company which contains an inquiry for American steel for making forks (hay, digging, coke, etc.), Siemens or Bessemer process, and requests the names of firms manufacturing high carbon steel of this sort.

Care of the Poor in Sweden.—Consul-General Winslow, of Stockholm, October 7, 1900, writes:

For the year 1898, the amount of money disbursed by the different counties in this Kingdom for the relief and care of the poor aggregated 13,500,000 crowns ($3,618,000), or about 2.61 kronor (69.9

cents) for each subject. One and a half million crowns ($402,000) were expended for buildings, homes, and the repair of the same; 10,000,000 crowns ($2,680,000) for food, fuel, clothes; and 1,750,000 crowns ($469,000) for expenses. Two hundred and forty-one thousand nine hundred and seventy-seven citizens received relief from the poor funds, which was a decrease of 4,585 as compared with 1897.

Italian Demand for Coal Pitch.—The Bureau of Foreign Commerce has received a letter from Mr. J. P. Spanier, 160 Corso Umberto I°, Rome, dated November 6, 1900, asking to be put in communication with some responsible firms in the United States who can offer full cargoes of pitch extracted from coal, to be used in the manufacturing of patent fuel. Considerable business, he says, can be transacted if connections are made with the proper party.

American Coal in Genoa.—Vice-Consul-General Hanauer, writing from Frankfort under date of September 13, 1900, says he is informed that negotiations are now pending for the formation in Genoa of an association with a capital of 20,000,000 francs ($3,860,000) for the sole purpose of importing American coal. The association is mainly composed of Italian manufacturers and individuals, but noted Swiss firms are also members.

Coal Sales at Gibraltar in October.—Consul Sprague writes from Gibraltar, November 12, 1900, that the current price for Cardiff coal rules at 36s. ($8.74) per ton. The contract price of 24s. ($5.84) per ton for coal for the present year will cease next month, and there is every probability of its being increased next year. It is said that coal companies are already negotiating with their associates in England for an important advance in price. A considerable part of the American cargo of the *Collingham*, imported last September, yet remains on hand, and the customers of the Union Coal Company that imported it will only accept half their wants in this coal and insist upon receiving the balance in Welsh.

A New German Petroleum Light.—Under date of October 12, 1900, Consul Hughes, of Coburg, writes that according to a report from the village of Simnozheim, in Wurttemberg, a new lighting system has been installed by the Washington Light Company, Limited,

of Elberfeld, called the "Washington light." The system is described as follows: From a large central petroleum reservoir, the oil from which the light is produced is distributed to the different lamps (through heavy copper pipes), where the petroleum is vaporized by a special apparatus and burner. The light is very brilliant and steady, and, as a very limited quantity of oil is used, the cost is slight. The royal Wurttemberg railroads have just concluded a contract with the company to put in a large lighting plant, according to this system, at the Cannstadter railroad shops at Stuttgart.

Effect of Incandescent Light on the Eyes.—Consul Hughes, of Coburg, under date of October 15, 1900, informs the Department that the medical faculty of the University of Heidelberg has made a very interesting report on the effect of incandescent light (gas or electrical) on the eyes. After having carefully weighed all the pros and cons of the question, the verdict is that the incandescent light is not harmful. For lighting large halls or places of entertainment, electricity is especially recommended from hygienic points of view.

Silk Industry in Europe.—Under date of October 6, 1900, Consul Hughes, of Coburg, says:

Owing to the disturbances in China, this industry is suffering in Germany, Italy, France, and Switzerland. A large falling off in the yield is shown as compared with last year, and it is feared that deliveries may be suspended. The prospect is the more serious as China silk is essentially the material for cheap fabrics. There is a general curtailment of production in the silk mills of the Lower Rhine district. From Crefeld, it is reported that an important firm of machinists, engaged in the production of machinery and appliances for silk manufacture, is dismissing large numbers of workmen.

Germany's Foreign Trade in Needles.—Under date of October 20, 1900, Vice-Consul-General Hanauer, of Frankfort, writes as follows:

Germany has almost ceased to be a customer of foreign countries for needles, having imported only 128,000 marks' ($30,720) worth during the first half of the present year, whereas she exported in the same period to the value of 6,679,000 marks ($1,602,960) in sewing,

embroidery, darning, and knitting needles, or 38 per cent more than she exported in the same time of 1899. The best customers were China, with 56.7 per cent; France, Austria-Hungary, and British East India, with about 4½ per cent each; etc.

American Bank in Rotterdam.—Vice-Consul-General Hanauer writes from Frankfort, under date of November 10, 1900, that an American bank has just been organized in Rotterdam, with a capital of 20,000,000 florins (about $8,000,000), of which 6,000,000 florins are paid up. The institution has for its aim the advancement of American trade, and bears the Dutch name "Deposito en Administratie Bank."

Consular Reports Transmitted to Other Departments.—The following reports from consular officers (originals or copies) have been transmitted since the date of the last report to other Departments for publication or for other action thereon:

Consular officer reporting.	Date.	Subject.	Department to which referred.
M. H. Twitchell, Kingston, Ontario.	Oct. 31, 1900	Crop report	Department of Agriculture.
W. M. Osborne, London	do	Report of hop crop	Do.
L. L. Stang, Saigon	Sept. 27, 1900	Report of rice market	Do.
Do	Oct. 11, 1900	do	Do.
O. J. D. Hughes, Coburg	Nov. 11, 1900	Chicken cholera	Do.

FOREIGN REPORTS AND PUBLICATIONS.

Commerce of Abyssinia.—The following is quoted from a recent edition of the Moniteur Officiel du Commerce, Paris:

The value of the import trade of Abyssinia was estimated at between 5,000,000 and 6,000,000 francs ($965,000 and $1,158,000). The chief articles of import were:

Articles.	Value.	Articles.	Value.
American unbleached cotton tissues	$463,200	Persian and Arabian carpets	$19,300 to $23,160
Indian cotton tissues	23,160	Ordinary European carpets	9,650
Manchester dressed cotton prints	$19,300 to 23,160	Swords (German and Russian origin)	9,650
Inferior value silk goods (mostly of French origin)	15,440 to 19,300	French hunting guns and revolvers	4,825
Black half-woolen dress goods	19,300	Kitchen utensils, ironware, cheap clocks and watches, hosiery, glassware, gold and silver watches	3,860
British madapollams and striped white cottons	38,600	Iron drain pipes	15,440
Cotton muslins (Manchester)	14,475 to 15,440	Candles, soap, morocco leather, small mirrors, preserves	5,790
Fine American drills	1,930	Spirituous drinks	28,950
Blue India Guinea cloth	48,250	Petroleum	3,860
English Turkey red	2,895 to 3,860	Toys, silk thread, tobacco, cigars, paper, etc	19,300
Other textiles	3,860		
Cotton yarn (British)	38,600		
Gunpowder (generally French, some British)	4,825		

The transport facilities from the coast to Abyssinia and back will only be changed by the completion of the projected railway. Sales in the retail trade are made almost exclusively for cash. In the wholesale trade, merchandise received before the rainy season (May and June) is paid for in September and October; goods received after the rainy season, at six months' credit or before the next business season. The chief articles of export are coffee, ivory, civet, gold, wax, and goatskins.

In consequence of the very low prices for coffee in 1899, trade in coffee has been practically abandoned. Coffee grows wild everywhere in Abyssinia and is only cultivated in Harrar. It is believed that the completion of the proposed railway line will cause a revival in this trade. The export of wax also suffered from the difficulties of transportation; only $38,600 worth was shipped. Ivory becomes more scarce every year, as the elephants disappear. Exports for 1899 were figured at $193,000. There are no manufactures of any importance except coarse cotton and woolen fabrics, saddlery goods, ornaments, simple agricultural tools, earthen vessels, etc.

Agriculture is only profitable on account of the great fertility of the soil. The crops of 1899 were insufficient on account of the drought. Stock raising is extended to sheep, goats, horned cattle, horses, donkeys, and mules. Scarcely enough wool was produced in 1899 to satisfy the home demand.

Trade of Erythrea.—The Bollettino di Statistica Commerciale, of Rome, contains a report which reads as follows:

The special trade of the colony Erythrea was divided into imports, $1,308,103, and exports, $248,965. The chief articles of import were:

Articles.	Value.	Articles.	Value.
Wine	$54,415	Flour	$39,927
Brandy	25,090	Edible pastes	36,673
Oils, except olive and mineral	20,445	Camels	19,383
Sugar and sirup	41,137	Horned cattle	99,519
Cotton yarn and tissues	332,268	Animal products	28,970
Wood	74,064	Hardware	41,727
Ironwares	24,753	Coin, precious metals and stones	45,763
Coal	34,740	Total (including other goods)	1,308,103
Doura	132,428		
Rice	34,446		

In the general trade the imports were valued at $1,750,778, distributed according to countries of origin as follows:

Country.	Value.	Country.	Value.
Italy	$328,185	Egypt	$87,248
France	53,011	Ports of Asiatic Turkey	191,539
Great Britain	244,167	India	643,523
Austria-Hungary	176,070	Russia	15,776

The transit trade to Abyssinia was valued at $224,336, chiefly cotton goods and flour; to the Sudan, $218,339, made up of cotton goods, sugar and sirup, flour, and hardware.

The export trade (general) was figured at $364,234, distributed according to countries of destination:

Country.	Value.	Country.	Value.
Italy	$24,194	Ports of Asiatic Turkey	$43,036
France	7,527	India	67,273
Austria-Hungary	125,188	Aden	42,174
Egypt	4,842		

The exports were pearls, mother-of-pearl, dried skins, animal products, precious metals, and coins.

Proposed Tunnel from England to Ireland.—The Magdeburger Zeitung, of November 8, 1900, discusses the question of building a railway tunnel between Great Britain and Ireland. It says:

The technical practicability of such a tunnel is unquestioned. Opinions vary about the route to be chosen. Three lines have been considered: a northern and a middle, both through the North Channel, and the southern route through the southern, or St. Georges, channel. The northern route is much the shortest; it

offers, however, the least advantages, inasmuch as it would demand a most circuitous road from England and Scotland. It can therefore be regarded as out of the question. Only the society of mining engineers favors the southern line. Most of the people prefer the middle line, which goes from the Magee Peninsula of the Irish district of Antrim to Port Patrick in the Scottish district of Wigtown. The length of this tunnel will be about 23.6 miles, and in addition 9.9 miles are estimated for the side approaches, making a total of 33.5 miles. The cost of the tunnel ground works is estimated at some $47,600,000, besides $9,520,000 for construction interest. Since no doubts exist about the possibility of completing so long a tunnel (the length of the tunnel through the St. Gothard is 9.3 miles, and that of the Simplon 11.8 miles), only the question of the profitableness of the undertaking must be considered. The promoters of the undertaking say that the tunnel would offer the shortest connection between Ireland on the one side and Scotland and northern England on the other, so that most of the agricultural products of Ireland would be carried to the manufacturing towns of Scotland and England in this way. Steamship companies will probably take one of the western ports of Ireland for the point of departure of their trans-Atlantic trade, since the coast of Ireland forms the most western point of Europe. It may also be expected that the passenger traffic between Europe and America will choose the tunnel route in order to shorten the sea voyage. Private capitalists have already pledged themselves to the undertaking, and will place the millions demanded for building the tunnel and only ask the Government to secure them a small paying interest—3 per cent of total cost—as soon as the tunnel is completed and ready for use. They will undertake the building of the tunnel at their own risk. It is believed that this colossal work could be completed within ten years. Of course, the time of building depends also upon the nature of the ground which may be found. The greatest depth of water is found in the most northern route and the least depth in the southern route, which is considerably longer than either of the others, viz, 46.6 miles by sea and 9.3 miles for the approaches on both sides, making a total of 55.9 miles. The most northern tunnel would be the shortest—14.9 miles by sea and 12.4 miles for the approaches, which are necessarily longer here, since the tunnel lies deeper, making a total of 27.3 miles in length.

Trade of the Somali Coast.—A British Foreign Office report (No. 2384) says that the commerce of the Somali Coast protectorate is represented by the imports and exports at the coast towns of Zaila and Berbera and Bulhar. Taking the exchange value of the rupee at 32.5 cents, the duty-paid trade of the protectorate may be shown as follows:

Ports.	1896–97.	1897–98.	1898–99.
Zaila.			
Imports	$664,764	$597,120	$849,204
Exports	1,468,710	832,658	953,834
Berbera and Bulhar.			
Imports	720,242	722,439	963,567
Exports	610,746	737,275	875,483
Total imports	1,385,006	1,319,559	1,812,771
Total exports	2,079,456	1,569,933	1,829,317
Grand total	3,464,462	2,889,492	3,642,088

The report continues:

The principal commodities imported at Zaila are gray shirtings and cotton piece goods, earthen and glass ware, rice and cereals, dates, and sugar. During the last five years, the trade of Bulhar has practically doubled. European white long cloth is gaining in popularity. At Zaila there is an increase of 233,844 yards in quantity, and on the Berbera side there is an increase of 45,437 yards. Within the last three years, the total imports of this article have increased from 522,865 yards to 918,921 yards. What stands in the way of a rapid extension of the trade in European white long cloth is the preference shown for the cheaper American gray shirting, which forms the ordinary wearing apparel of the Somali inland, and in which the chief trade in piece goods with the interior of the country is done. White long cloth is looked upon more or less as a luxury, and its use is chiefly confined to the townspeople. The European white long cloth (British) is sold in pieces of 40 yards by 1 yard; weight per piece, 6 to 7 pounds. The great drawback to it is that it is more expensive than American shirting, is not so durable, and is lighter. American gray shirting is very popular; there are several makes—the "Tiger Head," the "Somali Warrior," the "Camel," etc. The prices are nearly all the same; it is sold in pieces of 30 yards in length by 1 yard in width; weight per piece, 8¾ pounds; twenty-five pieces go to a bale. It washes well and contains very little starch. Bombay gray shirting is very inferior in quality and there is practically no demand for it. The best market will be for the cheaper kinds, and the whiter and stronger the material can be made the readier will the sale be found. The Somali wants a good article for his money and will not touch an oversized article. At Zaila, there is an increase in American gray shirting of 3,783,890 yards. Berbera returns show a decrease in quantity of 48,884 yards, whilst there is an increase at Bulhar of 310,920 yards. The trade is worth now $661,844, and if the Harrar trade is kept it will increase as the resources of the protectorate, and especially of Abyssinia, are developed. There is the whole of the protectorate and tracts to the east of it, the Ogaden and the country to the south, the southern portions of Abyssinia, and the Galla country, to be supplied with this commodity, now an ordinary requirement of life.

The exports are chiefly represented by coffee, skins, ivory, ghee (clarified butter), mother-of-pearl, pearls, and salt. The exports of coffee bear no proportion to the production, which is large and capable of indefinite expansion. The coffee bean is good and sound and compares favorably with the produce of Mocha. The Somali Coast furnishes Aden with its principal meat supply. The beef and mutton from the rich grazing grounds of the uplands bear a high reputation for excellence of quality. There is also a large increase in the exports of hides and skins.

There are no factories or industries as yet in the country. The population is essentially migratory, moving about with their herds and flocks, according to the season, where the conditions of water and pasturage are best. In the interior there are a few villages, but no census of the population has ever been taken. The two largest items of trade—the import of gray shirtings and the export of skins—valued together for the last year at $1,435,618, are entirely in the hands of Americans.

Peanut Industry in India.—The London Times of October 23, 1900, referring to a report by United States Consul Skinner, of Marseilles, on the peanut-oil industry of that port,* notes that the

*See ADVANCE SHEETS No. 680 (March 17, 1900); CONSULAR REPORTS No. 236 (May, 1900).

consul attributes the decline in imports of peanuts from India to the growth in home consumption in that country. The Times says that it is due also to other causes. It continues:

When a large demand for groundnuts first arose, their cultivation in India was extended to dry lands, rich or poor, and, though the yield was at first heavy, exhaustion of the soil soon began. This was accentuated by repeated sowing on the same land without rotation of crops and without fertilizers. The seed deteriorated and became an easy prey to disease, and consequently the outturn diminished. Further, the crops have suffered in recent years from unfavorable seasons, and the substitution of food crops for oil seeds, as a result of the two great famines, has entailed a restriction of the area allotted to earthnuts. One need not, then, be astonished that the surplus of seeds available for exportation has greatly diminished. It should, however, be mentioned that the falling off has been chiefly in the Madras presidency. In the Bombay presidency there has been no positive deterioration of the crop, though bad seasons have disastrously affected the outturn. The general view in Bombay is that, with fairly liberal management, the groundnut crop is normally a thriving and profitable one. But the seriousness of the decline in groundnut crops as a whole is best proved by the fact that, while the average exportation of groundnuts from British India for the three years 1893–94 to 1895–96 was 1,641 cwts., the average for the three years 1896–97 to 1898–99 was only 206 cwts. The groundnut industry of the French colony of Pondicherry has also been depressed, but the introduction of new seed from Senegal is said to have brought about a revival and led to an increase of exports. * * * The great oil-crushing centers—Marseilles and Havre—have been among the chief markets for Indian groundnuts. Groundnut oil is superior to cotton-seed oil for making good quality soaps, and it is used as an adulterant of, or substitute for, olive oil. Hence, a large and constant demand for the oil seems assured. It will therefore be satisfactory to traders to know that the government of India has been active in consulting agriculturists and chemists with the object of improving the crops and increasing the outturn, and that experiments are being tried with seeds from Mauritius and Mozambique.

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PUBLICATIONS OF THE BUREAU OF FOREIGN COMMERCE.*

The publications of the Bureau of Foreign Commerce, Department of State, are:

I.—COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

II.—CONSULAR REPORTS, issued monthly, and containing miscellaneous reports from diplomatic and consular officers.

III.—ADVANCE SHEETS, CONSULAR REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the newspaper press, commercial and manufacturing organizations, etc.

IV.—EXPORTS DECLARED FOR THE UNITED STATES, issued quarterly, and containing the declared values of exports from the various consular districts to the United States for the preceding three months.

V.—SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

Following are the special publications issued by the Bureau prior to 1890:

Labor in Europe, 1878, one volume; Labor in Foreign Countries, 1884, three volumes; Commerce of the World and the Share of the United States Therein, 1879; Commerce of the World and the Share of the United States Therein, 1880–81; Declared Exports for the United States, First and Second Quarters, 1883; Declared Exports for the United States, Third and Fourth Quarters, 1883; Cholera in Europe in 1884, 1885; Trade Guilds of Europe, 1885; The Licorice Plant, 1885; Forestry in Europe, 1887; Emigration and Immigration, 1885–86 (a portion of this work was published as CONSULAR REPORTS No. 76, for the month of April, 1887); Rice Pounding in Europe, 1887; Sugar of Milk, 1887; Wool Scouring in Belgium, 1887; Cattle and Dairy Farming in Foreign Countries, 1888 (issued first in one volume, afterwards in two volumes); Technical Education in Europe, 1888; Tariffs of Central America and the British West Indies, 1890.

The editions of all these publications except Tariffs in Central America, etc., are exhausted and the Department is, therefore, unable to supply copies.

In 1890, the Department decided to publish reports on special subjects in separate form, to be entitled SPECIAL CONSULAR REPORTS. There are now the following SPECIAL CONSULAR REPORTS:

Vol. 1 (1890).—Cotton Textiles in Foreign Countries, Files in Spanish America, Carpet Manufacture in Foreign Countries, Malt and Beer in Spanish America, and Fruit Culture in Foreign Countries.

Vol. 2 (1890 and 1891).—Refrigerators and Food Preservation in Foreign Countries, European Emigration, Olive Culture in the Alpes Maritimes, and Beet-Sugar Industry and Flax Cultivation in Foreign Countries.

Vol. 3 (1891).—Streets and Highways in Foreign Countries. (New edition, 1897.)

Vol. 4 (1891).—Port Regulations in Foreign Countries.

Vol. 5 (1891).—Canals and Irrigation in Foreign Countries. (New edition, 1898.)

Vol. 6 (1891 and 1892).—Coal and Coal Consumption in Spanish America, Gas in Foreign Countries, and India Rubber.

Vol. 7 (1892).—The Stave Trade in Foreign Countries and Tariffs of Foreign Countries.

Vol. 8 (1892).—Fire and Building Regulations in Foreign Countries.

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* Formerly Bureau of Statistics. Name changed to Bureau of Foreign Commerce by order of the Secretary of State, July 1, 1897.

Vol. 9 (1892 and 1893).—Australian Sheep and Wool and Vagrancy and Public Charities in Foreign Countries.

Vol. 10 (1894).—Lead and Zinc Mining in Foreign Countries and Extension of Markets for American Flour. (New edition, 1897.)

Vol. 11 (1894).—American Lumber in Foreign Markets. (New edition, 1897.)

Vol. 12 (1895).—Highways of Commerce. (New edition, 1899.)

Vol. 13 (1896 and 1897).—Money and Prices in Foreign Countries.

Vol. 14 (1898).—The Drug Trade in Foreign Countries.

Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe, Rabbits and Rabbit Furs in Europe, and Cultivation of Ramie in Foreign Countries. Part II. Sericulture and Silk Reeling and Cultivation of the English Walnut.

Vol. 16 (1899).—Tariffs of Foreign Countries. Part I. Europe. Part II. America. Part III. Asia, Africa, Australasia, and Polynesia. Supplement (1900). Tariffs of Chile and Nicaragua.

Vol. 17 (1899).—Disposal of Sewage and Garbage in Foreign Countries; Foreign Trade in Coal Tar and By-Products.

Vol. 18 (1900).—Merchant Marine of Foreign Countries.

Vol. 19 (1900).—Paper in Foreign Countries; Uses of Wood Pulp.

Vol. 20 (1900).—Part I. Book Cloth in Foreign Countries, Market for Ready-Made Clothing in Latin America, Foreign Imports of American Tobacco, and Cigar and Cigarette Industry in Latin America. Part II. School Gardens in Europe. Part III. The Stave Trade in Foreign Countries.

Vol. 21 (1900).—Part I. Foreign Markets for American Coal. Part II. Vehicle Industry in Europe. Part III. Trusts and Trade Combinations in Europe.

Of these SPECIAL CONSULAR REPORTS, Australian Sheep and Wool, Cotton Textiles in Foreign Countries; Disposal of Sewage, etc.; Files in Spanish America, Fire and Building Regulations, Gas in Foreign Countries, India Rubber, Lead and Zinc Mining, Malt and Beer in Spanish America, Port Regulations, Refrigerators and Food Preservation, Soap, etc.; Sericulture, etc.; Vagrancy, etc., are exhausted, and no copies can be supplied by the Department.

There was also published, in 1899, Proclamations and Decrees during the War with Spain, comprising neutrality circulars issued by foreign countries, proclamations by the President, orders of the War and Navy Departments, and war decrees of Spain.

Of the monthly CONSULAR REPORTS, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Bureau will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, the Department will forward franking labels to be used in lieu of postage in the United States, Canada, the Hawaiian Islands, and Mexico.

Persons receiving CONSULAR REPORTS regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to consular reports should be carefully addressed, "Chief, Bureau of Foreign Commerce, Department of State, Washington, U. S. A."

VALUES OF FOREIGN COINS AND CURRENCIES.

The following statements show the valuation of foreign coins, as given by the Director of the United States Mint and published by the Secretary of the Treasury, in compliance with the first section of the act of March 3, 1873, viz: "That the value of foreign coins, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the value of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the 1st day of January by the Secretary of the Treasury."

In compliance with the foregoing provisions of law, annual statements were issued by the Treasury Department, beginning with that issued on January 1, 1874, and ending with that issued on January 1, 1890. Since that date, in compliance with the act of October 1, 1890, these valuation statements have been issued quarterly, beginning with the statement issued on January 1, 1891.

The fact that the market exchange value of foreign coins differs in many instances from that given by the United States Treasury has been repeatedly called to the attention of the Bureau of Foreign Commerce. An explanation of the basis of the quarterly valuations was asked from the United States Director of the Mint, and under date of February 7, 1898, Mr. R. E. Preston made the following statement:

"When a country has the single gold standard, the value of its standard coins is estimated to be that of the number of grains fine of gold in them, 480 grains being reckoned equivalent to $20.67 in United States gold, and a smaller number of grains in proportion. When a country has the double standard, but keeps its full legal-tender silver coins at par with gold, the coins of both gold and silver are calculated on the basis of the gold value.

"The value of the standard coins of countries with the single silver standard is calculated to be that of the average market value of the pure metal they contained during the three months preceding the date of the proclamation of their value in United States gold by the Secretary of the Treasury. The value of the gold coins of silver-standard countries is calculated at that of the pure gold they contain, just as if they had the single gold standard.

"These valuations are used in estimating the values of all foreign merchandise exported to the United States."

The following statements, running from January 1, 1874, to January 1, 1901, have been prepared to assist in computing the values in American money of the trade, prices, values, wages, etc., of and in foreign countries, as given in consular and other reports. The series of years are given so that computations may be made for each year in the proper money values of such year. In hurried computations, the reductions of foreign currencies into American currency, no matter for how many years, are too often made on the bases of latest valuations. All computations of values, trade, wages, prices, etc., of and in the "fluctuating-currency countries" should be made in the values of their currencies in each year up to and including 1896, and in the quarterly valuations thereafter.

To meet typographical requirements, the quotations for the years 1875–1877, 1879–1882, and 1884–1887 are omitted, these years being selected as showing the least fluctuations when compared with years immediately preceding and following.

To save unnecessary repetition, the estimates of valuations are divided into three classes, viz: (A) countries with fixed currencies, (B) countries with fluctuating currencies, and (C) quarterly valuations of fluctuating currencies.

A.—*Countries with fixed currencies.*

The following official (United States Treasury) valuations of foreign coins do not include "rates of exchange."

Countries.	Standard.	Monetary unit.	Value in U.S. gold.	Coins.
Argentine Republic..	Gold and silver..	Peso.....	$0.96,5	Gold—argentine ($4.82,4) and ½ argentine; silver—peso and divisions.
Austria-Hungary*.....	Gold	Crown.....	.20,3	Gold—20 crowns ($4.05,2) and 10 crowns.
Belgium	Gold and silver..	Franc.....	.19,3	Gold—10 and 20 franc pieces; silver—5 francs.
Brazil.....	Gold	Milreis.....	.54,6	Gold—5, 10, and 20 milreis; silver—½, 1, and 2 milreis.
British North America (except Newfoundland).	.....do	Dollar.....	1.00	
British Honduras.....	.....do	.....do	1.00	
Chile.....	.....do	Peso.....	.36,5	Gold—escudo ($1.25), doubloon ($3.65), and condor ($7.30); silver—peso and divisions.
Costa Rica.....	.....do	Colon.....	.46,5	Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centisimos.
Cuba	Gold and silver..	Peso.....	.92,6	Gold—doubloon ($5.01,7); silver—peso (60 cents).
Denmark	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Egypt.....	.....do	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland.....	.....do	Mark.....	.19,3	Gold—10 and 20 marks ($1.93 and $3.85,9).
France	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Gold	Mark.....	.23,8	Gold—5, 10, and 20 marks.
Great Britain.....	.....do	Pound sterling...	4.86,6½	Gold—sovereign (pound sterling) and half sovereign.
Greece.....	Gold and silver..	Drachma.....	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti	.....do	Gourde.....	.96,5	Silver—gourde.
India†.....	Gold	Rupee	.32,4	Gold—sovereign ($4.8665); silver—rupee and divisions.
Italy.....	Gold and silver..	Lira	.19,3	Gold—5, 10, 20, 50, and 100 lire; silver—5 lire.
Japan‡.....	Gold.....	Yen.....	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia	.....do	Dollar.....	1.00	
Netherlands.....	Gold and silver..	Florin	.40,2	Gold—10 florins; silver—½, 1, and 2½ florins.
Newfoundland	Gold	Dollar.....	1.01,4	Gold—$2 ($2.02,7).
Peru§	.....do	Sol	.48,7	Gold—libra ($4.8665); silver—sol and divisions.
Portugal.....	.....do	Milreis.....	1.08	Gold—1, 2, 5, and 10 milreis.
Russia‖.....	.....do	Ruble.....	.51,5	Gold—imperial ($7.718) and ½ imperial ($3.80); silver—¼, ½, and 1 ruble.
Spain.....	Gold and silver..	Peseta.....	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden and Norway.	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Switzerland	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Gold	Piaster.....	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay	.....do	Peso.....	1.03,4	Gold—peso; silver—peso and divisions.
Venezuela.....	Gold and silver..	Bolivar.....	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

* The gold standard went into effect January 1, 1900 (see Commercial Relations, 1899, Vol. II, p. 7). Values are still sometimes expressed in the florin, which is worth 2 crowns.

† For an account of the adoption of the gold standard, see Consular Reports No. 238, p. 359.

‡ Gold standard adopted October 1, 1897. (See Consular Reports No. 201, p. 259.)

§ Gold standard adopted October 13, 1900.

‖ For an account of the adoption of the gold standard, see Review of the World's Commerce, 1896-97, p. 254.

B.—*Countries with fluctuating currencies, 1874–1896.*

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1874.	1878.	1883.	1888.	1889.	1890.
Austria-Hungary*.	Silver	Florin	$0.47,6	$0.45,3	$0.40,1	$0.34,5	$0.33,6	$0.42
Bolivia	do	Dollar until 1880; boliviano thereafter.	.96,5	.96,5	.81,2	.69,9	.68	.85
Central America	do	Peso	.96,5	.91,8	.....	.69,9	.68	.85
China	do	Haikwan tael	1.61	.....	.....	.....	.....	.....
Colombia	do	Peso	.96,5	.96,5	.81,2	.69,9	.68	.85
Ecuador	do	do	.96,5	.91,8	.81,2	.69,9	.68	.85
Egypt†	Gold	Pound (100 piasters).	.....	4.97,4	4.90	4.94,3	.....	.....
India	Silver	Rupee	.45,8	.43,6	.38,6	.32,2	.32,3	.40,4
Japan	Gold	Yen	.99,7	.99,7	.....	.99,7	.99,7	.99,7
	Silver		.....	.....	.87,6	.75,3	.73,4	.91,7
Mexico	do	Dollar	1.04,7½	.99,8	.88,2	.75,9	.73,9	.92,3
Netherlands‡	Gold and Silver.	Florin	.40,5	.38,5	.....	.....	.....	.....
Peru	Silver	Sol	.92,5	.91,8	.81,2	.69,9	.68	.85
Russia	do	Ruble	.77,17	.73,4	.65	.55,9	.54,4	.68
Tripoli	do	Mahbub of 20 piasters.	.87,09	.82,9	.73,3	.63	.61,4	.76,7

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1891.	1892.	1893.	1894.	1895.	1896.
Austria-Hungary*.	Silver	Florin	$0.38,1	$0.34,1	.....	.....	.....	.....
Bolivia	do	Boliviano	.77,1	.69,1	$0.61,3	$0.51,6	$0.45,5	$0.49,1
Central America	do	Peso	.77,1	.69,1	.61,3	.51,6	.45,5	.49,1
Colombia	do	do	.77,1	.69,1	.61,3	.51,6	.45,5	.49,1
Ecuador	do	do	.77,1	.69,1	.61,3	.51,6	.45,5	.49,1
India	do	Rupee	.36,6	.32,8	.29,2	.24,5	.21,6	.23,3
Japan	do	Yen	.83,1	.74,5	.66,1	.55,6	.49,1	.52,9
Mexico	do	Dollar	.83,7	.75	.66,6	.56	.49,5	.53,3
Peru	do	Sol	.77,1	.69,1	.61,3	.51,6	.45,5	.49,1
Russia	do	Ruble	.61,7	.55,3	.49,1	.41,3	.36,4	.39,3
Tripoli	do	Mahbub of 20 piasters.	.69,5	.62.3	.55,3	.46,5	.41,1	.44,3

*The silver standard prevailed in Austria-Hungary up to 1892. The law of August 2 of that year (see CONSULAR REPORTS No. 147, p. 623) established the gold standard.

†The Egyptian pound became fixed in value at $4.94,3 in 1887.

‡The Netherlands florin fluctuated up to the year 1880, when it became fixed at 40.2 cents.

C.—*Quarterly valuations of fluctuating currencies.*

Countries.	Monetary unit.	1898.				1899.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Bolivia	Silver boliviano.	$0.42,4	$0.40,9	$0.41,8	$0.43,6	$0.43,9	$0.43,4	$0.44,3	$0.43,6
Central America.	Silver peso	.41,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3	.43,6
China	Amoy tael	.68,5	.66,2	.67,6	.70,6	.71	.70,2	.71,6	.70,5
	Canton tael	.68,3	.66	.67,4	.70,4	.70,8	.70	.71,4	.70,3
	Chefoo tael	.65,5	.63,3	.64,6	.67,5	.67,9	.67,2	.68,4	.67,4
	Chinkiang tael	.66,9	.64,6	.66	.69	.69,3	.68,6	.69,9	.68,9
	Fuchau tael	.63,4	.61,2	.62,5	.65,3	.65,6	.65	.66,2	.65,2
	Haikwan tael	.69,7	.67,3	.68,8	.71,8	.72,2	.71,4	.72,8	.71,8
	Hankau tael	.64,1	.61,9	.63,2	.66	.66,4	.65,7	.67	.66
	Hongkong tael	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
	Ningpo tael	.64,3	.63	.65	.67,9	.68,2	.67,5	.68,8	.67,8
	Niuchwang tael	.65,9	.62	.63,4	.66,2	.66,5	.65,9	.67,1	.66,1
	Shanghai tael	.62,6	.60,4	.61,7	.64,5	.64,8	.64,1	.65,4	.64,4
	Swatow tael	.63,3	.61,1	.62,4	.65,2	.65,5	.64,9	.66,1	.65,1
	Takao tael	.66	.66,6	.68	.71	.71,4	.70,7	.72	.71
	Tientsin tael	.66,4	.64,1	.65,5	.68,4	.68,8	.68	.69,4	.68,3
Colombia	Silver peso	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3	.43,6
Ecuador	...do...	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3	.43,6
India	Silver rupee†	.20,1	.19,1	.19,9	.20,7	.20,8	.20,6	.21	.20,7
Mexico	Silver dollar	.46	.44,4	.45,4	.47,4	.47,7	.47,2	.48,1	.47,4
Persia	Silver kran	.07,8	.07,5	.07,7	.08	.08,1	.08	.08,2	.08
Peru	Silver sol	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3	.43,6

Countries.	Monetary unit.	1900.				1901.
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.
Bolivia	Silver boliviano.	$0.42,7	$0.43,6	$0.43,8	$0.45,1	$0.46,8
Central America	Silver peso	.42,7	.43,6	.43,8	.45,1	.46,5
China	Amoy tael	.69,1	.70,5	.70,9	.72,9	.75,7
	Canton tael	.68,9	.70,3	.70,7	.72,7	.75,5
	Chefoo tael	.66,1	.67,4	.67,8	.69,7	.72,4
	Chinkiang tael	.67,5	.68,8	.69,3	.71,2	.74
	Fuchau tael	.64	.65,2	.65,6	.67,4	.70,1
	Haikwan tael	.70,3	.71,7	.72,1	.74,2	.77,1
	Hankau tael	.64,7	.65,9	.66,3	.68,2	.70,9
	Hongkong tael	(*)	(*)	(*)	(*)	(*)
	Ningpo tael	.66,5	.67,7	.68,2	.70,1	.72,8
	Niuchwang tael	.64,8	.66,1	.66,5	.68,4	.71
	Shanghai tael	.63,1	.64,4	.64,8	.66,6	.69,2
	Swatow tael	.63,9	.65,1	.65,5	.67,4	.70
	Takao tael	.69,6	.70,9	.71,4	.73,4	.76,2
	Tientsin tael	.67	.68,3	.68,7	.70,7	.73,4
Colombia	Silver peso	.42,7	.43,6	.43,8	.45,1	.46,8
Ecuador	...do...	.42,7	.43,6	.43,8	.45,1	.46,8
India	Silver rupee†	.20,3	.20,7	.20,8	.....	.....
Mexico	Silver dollar	.46,4	.47,3	.47,6	.49,0	.50,9
Persia	Silver kran	.07,9	.08	.08,1	.08,3	.08,6
Peru	Silver sol	.42,7	.43,6	.43,8	.48,7	.....

*The "British dollar" has the same legal value as the Mexican dollar in Hongkong, the Straits Settlements, and Labuan.

†The sovereign is the standard coin of India, but the rupee is the money of account.

FOREIGN WEIGHTS AND MEASURES.

The following table embraces only such weights and measures as are given from time to time in CONSULAR REPORTS and in Commercial Relations:

Foreign weights and measures, with American equivalents.

Denominations.	Where used.	American equivalents.
Almude	Portugal	4.422 gallons.
Ardeb	Egypt	7.6907 bushels.
Are	Metric	0.02471 acre.
Arobe	Paraguay	25 pounds.
Arratel or libra	Portugal	1.011 pounds.
Arroba (dry)	Argentine Republic	25.3175 pounds.
Do	Brazil	32.38 pounds.
Do	Cuba	25.3664 pounds.
Do	Portugal	32.38 pounds.
Do	Spain	25.36 pounds.
Do	Venezuela	25.4024 pounds.
Arroba (liquid)	Cuba, Spain, and Venezuela	4.263 gallons.
Arshine	Russia	28 inches.
Arshine (square)	do	5.44 square feet.
Artel	Morocco	1.12 pounds.
Baril	Argentine Republic and Mexico	20.0787 gallons.
Barrel	Malta (customs)	11.4 gallons.
Do	Spain (raisins)	100 pounds.
Berkovets	Russia	361.12 pounds.
Bongkal	India	832 grains.
Bouw	Sumatra	7,096.5 square meters.
Bu	Japan	0.1 inch.
Butt (wine)	Spain	140 gallons.
Caffiso	Malta	5.4 gallons.
Candy	India (Bombay)	529 pounds.
Do	India (Madras)	500 pounds.
Cantar	Morocco	113 pounds.
Do	Syria (Damascus)	575 pounds.
Do	Turkey	124.7036 pounds.
Cantaro (cantar)	Malta	175 pounds.
Carga	Mexico and Salvador	300 pounds.
Catty	China	1.333⅓ (1⅓) pounds.
Do*	Japan	1.31 pounds.
Do	Java, Siam, and Malacca	1.35 pounds.
Do	Sumatra	2.12 pounds.
Centaro	Central America	4.2631 gallons.
Centner	Bremen and Brunswick	117.5 pounds.
Do	Darmstadt	110.24 pounds.
Do	Denmark and Norway	110.11 pounds.
Do	Nuremberg	112.43 pounds.
Do	Prussia	113.44 pounds.
Do	Sweden	93.7 pounds.
Do	Vienna	123.5 pounds.
Do	Zollverein	110.24 pounds.
Do	Double or metric	220.46 pounds.
Chih	China	14 inches.

*More frequently called "kin." Among merchants in the treaty ports it equals 1.33⅓ pounds avoirdupois.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Coyan	Sarawak	3,098 pounds.
Do	Siam (Koyan)	2,667 pounds.
Cuadra	Argentine Republic	4.2 acres.
Do	Paraguay	78.9 yards.
Do	Paraguay (square)	8.077 square feet.
Do	Uruguay	Nearly 2 acres.
Cubic meter	Metric	35.3 cubic feet.
Cwt. (hundredweight)	British	112 pounds.
Dessiatine	Russia	2.6997 acres.
Do	Spain	1.599 bushels.
Drachme	Greece	Half ounce.
Egyptian weights and measures	(*See* CONSULAR REPORTS No. 144.)	
Fanega (dry)	Central America	1.5745 bushels.
Do	Chile	2.575 bushels.
Do	Cuba	1.599 bushels.
Do	Mexico	1.54728 bushels.
Do	Morocco	Strike fanega, 70 lbs.; full fanega, 118 lbs.
Do	Uruguay (double)	7.776 bushels.
Do	Uruguay (single)	3.888 bushels.
Do	Venezuela	1.599 bushels.
Fanega (liquid)	Spain	16 gallons.
Feddan	Egypt	1.03 acres.
Frail (raisins)	Spain	50 pounds.
Frasco	Argentine Republic	2.5096 quarts.
Do	Mexico	2.5 quarts.
Frasila	Zanzibar	35 pounds.
Fuder	Luxemburg	264.17 gallons.
Garnice	Russian Poland	0.88 gallon.
Gram	Metric	15.432 grains.
Hectare	....do	2.471 acres.
Hectoliter:		
Dry	....do	2.838 bushels.
Liquid	....do	26.417 gallons.
Joch	Austria-Hungary	1.422 acres.
Ken	Japan	6 feet.
Kilogram (kilo)	Metric	2.2046 pounds.
Kilometer	....do	0.621376 mile.
Klafter	Russia	216 cubic feet.
Koku	Japan	4.9629 bushels.
Korree	Russia	3.5 bushels.
Kwan	Japan	8.28 pounds.
Last	Belgium and Holland	85.134 bushels.
Do	England (dry malt)	82.52 bushels.
Do	Germany	2 metric tons (4,480 pounds).
Do	Prussia	112.29 bushels.
Do	Russian Poland	113⅝ bushels.
Do	Spain (salt)	4,760 pounds.
League (land)	Paraguay	4,633 acres.
Li	China	2,115 feet.
Libra (pound)	Argentine Republic	1.0127 pounds.
Do	Central America	1.043 pounds.
Do	Chile	1.014 pounds.
Do	Cuba	1.0161 pounds.
Do	Mexico	1.01465 pounds.
Do	Peru	1.0143 pounds.
Do	Portugal	1.011 pounds.
Do	Spain	1.0144 pounds.
Do	Uruguay	1.0143 pounds.
Do	Venezuela	1.0161 pounds.
Liter	Metric	1.0567 quarts.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Livre (pound)	Greece	1.1 pounds.
Do	Guiana	1.0791 pounds.
Load	England (timber)	Square, 50 cubic feet; unhewn, 40 cubic feet; inch planks, 600 superficial feet.
Manzana	Costa Rica	1⅞ acres.
Do	Nicaragua and Salvador	1.727 acres.
Marc	Bolivia	0.507 pound.
Maund	India	82⅔ pounds.
Meter	Metric	39.37 inches.
Mil	Denmark	4.68 miles.
Do	Denmark (geographical)	4.61 miles.
Milla	Nicaragua and Honduras	1.1403 miles.
Morgen	Prussia	0.63 acre.
Oke	Egypt	2.7225 pounds.
Do	Greece	2.84 pounds.
Do	Hungary	3.0817 pounds.
Do	Turkey	2.85418 pounds.
Do	Hungary and Wallachia	2.5 pints.
Pic	Egypt	21¼ inches.
Picul	Borneo and Celebes	135.64 pounds.
Do	China, Japan, and Sumatra	133⅓ pounds.
Do	Java	135.1 pounds.
Do	Philippine Islands	137.9 pounds.
Pie	Argentine Republic	0.9478 foot.
Do	Spain	0.91407 foot.
Pik	Turkey	27.9 inches.
Pood	Russia	36.112 pounds.
Pund (pound)	Denmark and Sweden	1.102 pounds.
Quarter	Great Britain	8.252 bushels.
Do	London (coal)	36 bushels.
Quintal	Argentine Republic	101.42 pounds.
Do	Brazil	130.06 pounds.
Do	Castile, Chile, Mexico, and Peru	101.61 pounds.
Do	Greece	123.2 pounds.
Do	Newfoundland (fish)	112 pounds.
Do	Paraguay	100 pounds.
Do	Syria	125 pounds.
Do	Metric	220.46 pounds.
Rottle	Palestine	6 pounds.
Do	Syria	5¾ pounds.
Sagen	Russia	7 feet.
Salm	Malta	490 pounds.
Se	Japan	0.02451 acres.
Seer	India	1 pound 13 ounces.
Shaku	Japan	11.9305 inches.
Sho	do	1.6 quarts.
Standard (St. Petersburg)	Lumber measure	165 cubic feet.
Stone	British	14 pounds.
Suerte	Uruguay	2,700 cuadras (see cuadra).
Sun	Japan	1.193 inches.
Tael	Cochin China	590.75 grains (troy).
Tan	Japan	0.25 acre.
To	do	2 pecks.
Ton	Space measure	40 cubic feet.
Tonde (cereals)	Denmark	3.94783 bushels.
Tondeland	do	1.36 acres.
Tsubo	Japan	6 feet square.
Tsun	China	1.41 inches.
Tunna	Sweden	4.5 bushels.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Tunnland	Sweden	1.22 acres.
Vara	Argentine Republic	34.1208 inches.
Do	Central America	32.87 inches.
Do	Chile and Peru	33.367 inches.
Do	Cuba	33.384 inches.
Do	Curaçao	33.375 inches.
Do	Mexico	33 inches.
Do	Paraguay	34 inches.
Do	Spain	0.914117 yard.
Do	Venezuela	33.384 inches.
Vedro	Russia	2.707 gallons.
Vergees	Isle of Jersey	71.1 square rods.
Verst	Russia	0.663 mile.
Vlocka	Russian Poland	41.98 acres.

METRIC WEIGHTS AND MEASURES.

Metric weights.

Milligram ($\frac{1}{1000}$ gram) equals 0.0154 grain.
Centigram ($\frac{1}{100}$ gram) equals 0.1543 grain.
Decigram ($\frac{1}{10}$ gram) equals 1.5432 grains.
Gram equals 15.432 grains.
Decagram (10 grams) equals 0.3527 ounce.
Hectogram (100 grams) equals 3.5274 ounces.
Kilogram (1,000 grams) equals 2.2046 pounds.
Myriagram (10,000 grams) equals 22.046 pounds.
Quintal (100,000 grams) equals 220.46 pounds.
Millier or tonnea—ton (1,000,000 grams) equals 2,204.6 pounds.

Metric dry measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.061 cubic inch.
Centiliter ($\frac{1}{100}$ liter) equals 0.6102 cubic inch.
Deciliter ($\frac{1}{10}$ liter) equals 6.1022 cubic inches.
Liter equals 0.908 quart.
Decaliter (10 liters) equals 9.08 quarts.
Hectoliter (100 liters) equals 2.838 bushels.
Kiloliter (1,000 liters) equals 1.308 cubic yards.

Metric liquid measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.0388 fluid ounce.
Centiliter ($\frac{1}{100}$ liter) equals 0.338 fluid ounce.
Deciliter ($\frac{1}{10}$ liter) equals 0.845 gill.
Liter equals 1.0567 quarts.
Decaliter (10 liters) equals 2.6418 gallons.
Hectoliter (100 liters) equals 26.417 gallons.
Kiloliter (1,000 liters) equals 264.18 gallons.

Metric measures of length.

Millimeter ($\frac{1}{1000}$ meter) equals 0.0394 inch.
Centimeter ($\frac{1}{100}$ meter) equals 0.3937 inch.
Decimeter ($\frac{1}{10}$ meter) equals 3.937 inches.
Meter equals 39.37 inches.

Decameter (10 meters) equals 393.7 inches.
Hectometer (100 meters) equals 328 feet 1 inch.
Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).
Myriameter (10,000 meters) equals 6.2137 miles.

Metric surface measures.

Centare (1 square meter) equals 1,550 square inches.
Are (100 square meters) equals 119.6 square yards.
Hectare (10,000 square meters) equals 2.471 acres

CONSULAR REPORTS.

COMMERCE, MANUFACTURES, ETC.

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TARIFF OF SALVADOR.

Although the duties on importation have increased somewhat in the last few years, it is due rather to the frequent changes in the method of taxes than to an increase of the specific duties on certain articles; therefore, a comparison with the last tariff as published would be of no practical value, especially as since that time (1891) the relative values of gold and silver have changed considerably. In the tariff published by the Bureau of the American Republics, the peso is valued at 72.3 cents, whereas in the present translation the calculations have been based upon the peso being worth 40 cents gold, which is a fair average commercial valuation, United States coin being generally quoted here at about 150 premium.

The present tariff is much more comprehensive than the former one, and the general tendency is toward moderation of the specific duties.

The following articles no longer appear on the free list: Anchors, beans, boats or launches, corn, crucibles, diamonds and precious stones, hay or fodder, hops, houses, kettles and molds for sugar, magnets, models, music, photographs, printing presses, portraits, quicksilver, quinine, rice, and rye. The following articles have been added to the free list: Agricultural machinery, apparatus for extinguishing fires, barbed wire, iron cans for balsam, carbide of calcium, chalk for schools, raw cotton, filters and distilling apparatus, gasoline, hair of rabbits and hares, ink for printing and lithographing, looms, mining apparatus, platinum, silver, sulphide of carbon, surgical instruments, vaccine fluids, and serums.

The method of collecting duties and surtaxes upon importation is, to say the least, somewhat obscure and needs an explanation by illustration. Supposing a merchant has a consignment of goods

weighing 500 kilograms (1,142 pounds), and the schedule of duties on those goods is 30 cents silver per kilogram. By a decree published on April 3, 1900, the duties were raised to 150 per cent (see CONSULAR REPORTS No. 239, August, 1900); therefore, the goods are assessed at 45 cents per kilogram, making $225; to this is added the various surtaxes as per article 573, amounting to $8 per 100 kilograms (220.46 pounds), making the amount to be paid $265; to which is added 30 per cent on the original $225 for public charities (see article 576), bringing the amount to $332.50; to that amount must be added the costs of the policies and labor—another $5. Of the original $225 which constitutes 150 per cent of the schedule duties, 125 per cent is payable in Salvador bonds (see article 595). Of the surtaxes, $3 per 100 kilograms must be paid in silver, and so must the 30 per cent of $225 and other minor items; therefore the merchant must pay, roughly speaking, $90 in cash. The remainder—$247—is applied to the liquidation of the numerous debts of the Government, which at the present time are divided between eight or ten different creditors, some getting 10 per cent, others 6 per cent, and so on. The merchant must provide himself with the various bonds representing the various debts; these can at times be obtained on advantageous terms, but they fluctuate so much in value that it is almost impossible to give an exact idea of how much the merchant gains by purchasing depreciated bonds and having them accepted at the custom-house at par.

The tariff in general is protective; that is to say, raw materials that might, with the facilities of abundant cheap labor and water power which Salvador enjoys, be elaborated or manufactured here are scheduled at low rates, while manufactured articles of the same materials are scheduled at higher rates, according to the amount of mechanical or other labor necessary to produce the finished article. For instance, silk is scheduled at rates varying from 30 cents silver to $20 per kilogram (2.2046 pounds), according to the degree of labor necessary in its production.

From the appendix, it will be noted that changes in the tariffs and surtaxes are of frequent occurrence, the latter going into effect from the day of publication, causing annoyance, inconvenience, and losses to importers.

The last two pages of the published edition are devoted to errata, and these errors have impeded the work of the translation, in which they are included.

JOHN JENKINS,

SAN SALVADOR, *November 10, 1900.* *Consul.*

TARIFF OF ASSESSMENTS TO SERVE AS A BASIS FOR THE COLLECTION OF DUTIES AND FISCAL IMPOSTS IN THE CUSTOM-HOUSES OF SALVADOR.

TARIFF.

Cotton, linen, woolen and silken goods, etc.

	Rate (U. S. currency) per 100 pounds.
Cotton:	
Raw, or in yarns, bleached or colored, for weaving	Free.
In the form of sailcloth, for the use of vessels in the ports, lakes or rivers of the Republic, (exempt from surtax of 55 cents per 100 pounds)	$0. 18
Yarns, twisted, for fishing nets or cordage (by cordage is understood cords of from 1 to 3 millimeters in diameter), waste for machinery	. 37
Cloth, stout, for awnings or cart covers, pitch coated or otherwise	1. 84
Coarse fabrics, as "manta," "manta drill," and drill, uncolored, drag and fishing nets	3. 68
Wicks, for lighting purposes	4. 60
Buttons, cotton covered; umbrellas, parasols, canvas hose pipe, tarred or otherwise	5. 52
Cloth, bleached, plain, uncolored, without sewing, working or embroidery, such as the fabrics known as madapollams, bogotana, calico, family cloth, sheetings, croydons, crashes, "estrebillas," canvas for embroidery or otherwise, cambrics, tarlatans, white, starched; white cloth mixed with horsehair for interlining and other purposes; cotton thread for sewing and embroidery of all classes and colors	7. 36
Carpets, rugs, and material for the same; elastic for shoes, tape, plain or twilled, white and colored, for shoe and harness makers; tape known as "castile"	9. 20
In cambrics or tarlatans, starched, plain, colored; and colored cloths mixed with horsehair for interlining and other purposes; printed or dyed fabrics, plain or glossed, as cretonne, cambric, muslin, gauze, and bandana, without sewing, embroidery, piercing, raveling, lace, percale work, or crimping, that is to say without any modification or elaboration whatever of the plain common fabric; "manta drill," crude or bleached with any entire color or colors, drill of all kinds, not classified, piqué, canton, and similar stuffs; imitation cassimere of pure cotton, plain cotton flannel; ribbons with clasps or eyelet holes	11. 04
Bedspreads, blankets, towels, bed curtains, ponchos, serapes, hammocks, napkins, tablecloths, and material for the same, cotton sacks and bags for packing	13. 80
Socks and stockings, shirts and undershirts, drawers and all kinds of underwear not classified, knitted or otherwise, without lace or embroidery of any kind, shawls, handkerchiefs, "mantillas" of all kinds, plain flags, wicks for smokers	14. 72
White fabrics, plain, unsewed, with working or embroidery, such as victoria and other cambrics, bishop's lawn, Swiss muslin, gauze, point, tulle, crepe, and other fancy stuffs, embroidered, worked, pleated, raveled, pierced, crimped, plaited, or with insertions; piqué, bombazine, dimity, and in general all white stuffs not specified, with any modification, however trifling of the original texture; printed or dyed stuffs not classified, without sewing, but elaborated or embroidered, or with any modification whatever of the original texture; velvet,	

Cotton—Continued.	Rate (U. S. currency) per 100 pounds.
plush, tablecloths, curtains, point or otherwise, antimacassars, furniture tidies, mats for lamps or flowerpots, plain or with woolen fringes; mosquito nets; men's and boys' shirts with linen fronts and linen collars and cuffs attached, or of pure cotton; velvet ribbons of all widths, sashes, belts, with or without elastic, garters, suspenders, scarfs, gloves, veils, saddlebags, purses, traveling bags, and all similar objects not specified, laces, insertions, galloons, of less than 2½ centimeters (0.984 inch) in width (when the latter are contained in the same package, or mixed with those of 2½ centimeters or more in width, they must pay a duty of $55.20 per 100 pounds)	$18.40
Shirt fronts, collars and cuffs, for men's shirts; corsets, bustles, crinolines and similar artificial contrivances; caps and bonnets	27.60
Underclothing, knitted or otherwise, with lace or embroidery; ready-made clothing of all kinds, for men, women and children, not classified; linings for hats, umbrellas and parasols; baptismal head gear and veils; shoes, slippers, and all kinds of foot wear, in parts or ready made; gaiters, laces, ornaments, galloons, ribbons, and tape, with embroidery or insertions, of 2½ centimeters and upwards in width; shawls and materials for the same, in imitation of the native article	55.20
Articles of hemp, flax (linen), and jute:	
Hemp and similar fibers, in cordage for the use of vessels in the ports, lakes and rivers of the Republic; (exempt from surtax of 55 cents per 100 pounds)	.18
Hemp, coarse, and empty sacks and bags of jute, tarred or otherwise, untwisted thread for sewing the same; jute in bulk, either tangled or combed out	.55
Hemp or flax, in ropes and cables, tarred or otherwise, of more than 2½ centimeters in diameter; hemp or jute, pure or mixed, in coarse fabrics as those known as "bramant," and sackcloth for baling goods, the same, tarred or waxed, for the same purposes	.92
Flax or hemp, in stout awning cloths, tarred or otherwise	1.84
Flax or hemp, pure or mixed with cotton, in canvas, Russia duck, nankeen; umbrellas and parasols; jute, or coarse hemp, in carpets, rugs, foot and door mats, curtains, table covers, hammocks, or woven fabrics for the same, and for furniture covers	9.20
Flax or hemp, pure or mixed with cotton, in twisted strings, fishing and drag nets, seines, ropes of 2½ centimeters (0.984 inch) or less in diameter	3.68
Flax or hemp, in buttons covered with linen, canvas hose pipe, whether tarred or otherwise	5.52
Flax or hemp, pure or mixed with cotton, in rough drills, white or colored, belts, with clasps or eyelet holes	11.04
Flax or hemp, pure or mixed with cotton, in sewing thread and empty sacks for indigo	14.72
Flax or hemp, pure or mixed with cotton, in plain or elaborated cloths, white or colored, as crashes (bleached cloth of up to twenty threads to the English quarter inch,) French linen, tablecloths, damask, piqué, sheeting, furniture spreads, and similar objects not specified, without sewing or embroidery; hempen thread for embroidery, cambric, or waxed cloth, and cloth mixed with horsehair for linings; towels, halters, bands or girths, with or without metal settings	18.40

	Rate (U. S. currency) per 100 pounds.
Articles of hemp, flax (linen), and jute—Continued.	
Flax or hemp, pure or mixed with cotton, in fine, unsewed fabrics, embroidered, elaborated or otherwise, white or colored, as Irish linens, bretonnes, cambrics, batistes, and all other fine cloths for garments or other uses, not specified; handkerchiefs, undershirts, drawers, stockings, socks, shirt fronts, cuffs and collars, men's shirts, and all kinds of underwear without lace or embroidery; tablecloths and napkins; belts, with or without elastic, braids, meshes, tassels, braided cords, caps, bonnets and hats; corsets, bustles, crinolines, and other artificial contrivances; bedspreads, table covers; curtains and hammocks, not classified; antimacassars, mosquito nets, floor mats, mats for lamps and flowerpots, traveling bags and purses.....	$27. 60
Flax or hemp, pure or mixed with cotton, in neckties, gloves, scarfs, sashes, with or without elastic, garters, belts, bands, shawls, mantillas, fichus, ladies' veils, and all other manufactured articles not classified	36. 80
Flax, pure, or mixed with cotton, in laces, blondes, and ribbons, embroidered or with insertions, galloons and unclassified ornaments, foot wear of all kinds, ready made or in parts, gaiters, underwear, knitted or otherwise, with lace or embroidery, ready-made clothing, shawls and materials for the same, face masks, linings for hats, umbrellas and parasols; baptismal headdresses and veils.....	55. 20
Woolen articles:	
Wool in the fleece.....	2. 76
Wool, pure, or mixed with cotton or flax, in carpets, mats, rugs, horse-cloths, blankets, bedspreads; and elastic for shoes.....	9. 20
Wool, pure, or mixed with cotton or flax, in wool-covered buttons.....	11. 04
The same in umbrellas and parasols.....	14. 72
The same, in thread for sewing or embroidery, with or without mixture of common metal thread or wire; the following materials when the whole of the warp or chain is of pure cotton thread, or other pure vegetable fiber; cassimeres, cambrics, alpacas, baize, challis, curtains, furniture spreads, serge, satin, damask, flannel, "grano de oro," muslin, merino, cashmere, and similar materials not classified...	18. 40
Wool, pure, or mixed with cotton or flax, in cashmeres, tweeds, cambrics, alpaca, baize, cloth for curtains or furniture covers, serge, satin, damask, flannel, muslin, merino, cashmere and similar materials not classified; all unspecified fabrics, either pure or mixed with flax or cotton; flannel shirts, fine or common; caps and hats; elastic bands or belts, not intended for shoes; corsets, bustles, crinolines and similar artificial contrivances.....	27. 60
Wool, pure, or mixed with cotton or flax, in stockings, socks, drawers, undershirts, and all knitted articles not specified, without lace or embroidery; belts, bands, sashes, with or without elastic, girths, garters, suspenders, gloves, traveling bags and valises.....	36. 80
Wool, in shirts, with slight admixture of silk; pure or mixed with flax or cotton, ornaments, such as tapes, laces, blondes, braids, cords, plush, tassels, fringes, galloons, ribbons, or any similar article not specified; foot wear of all kinds, made up or in parts.....	55. 20
Wool, pure or mixed with cotton or flax, in underwear, knitted or otherwise when laced or embroidered; ready-made garments, as	

	Rate (U. S. currency) per 100 pounds.
Woolen articles—Continued.	
wraps, mantillas, capes, fichus, dressing gowns, jackets, cloaks, blouses, mantles, coats, vests, shawls, curtains, antimacassars, tidies, mats for lamps and flowerpots, table covers, flags, petticoats, men's, women's, and children's clothing, plain and ornamented; shawls, plain or with silk fringe, embroidered or otherwise, and other articles of clothing not classified; baptismal headdresses and veils; linings for hats, umbrellas and parasols	$73.60
Ramie, and articles of the same:	
Ramie in bulk, or in yarns	13.80
Ramie, woven, plain, pure or mixed, unsewed	46.00
Ramie underwear	92.00
Ramie ready-made clothing for men, women, and children; ornamental, and in ornamental fabrics	110.40
Silk, pure, or mixed with cotton, linen, wool, or ramie, in the following forms:	
Cheesecloth, for strainers or sieves	5.52
Buttons, silk covered	11.04
Elastic for shoes	18.40
Unwoven, and all kinds of threads on cards or wooden reels	23.00
Twisted in skeins for weaving and thread in skeins; hats, caps, and bonnets; umbrellas and parasols, mixed with wool or other material	27.60
Pure, in umbrellas and parasols	36.80
Handkerchiefs, plain or embroidered, scarfs, garters, suspenders, elastic bands, not intended for shoes; fabrics such as alpaca, challis, crepe for dresses, damask, gros, faille, muslin, point, piqué, tulle, satin, serge, satinette, taffeta, or other similar goods, when all the warp or chain is of pure cotton thread or other pure vegetable fiber; corsets, bustles, crinolines, and other similar artificial contrivances; foot wear of all kinds, ready made or in parts	55.20
Underwear of all kinds, stockings, drawers, undershirts, gloves, and all other articles knitted from silken threads, not mentioned; antimacassars, curtains, sashes and bands, plain or embroidered; quilts, bedspreads; belts with or without elastic; table covers; fabrics such as alpaca, challis, crepe, damask, gros, faille, muslin, piqué, point, tulle, satin, surah, serge, satinette, taffeta, or any other silken goods, pure or mixed, not classified; plush, velvet	92.00
Mantillas or shawls, plain or embroidered; fancy ornaments, belts without elastic, laces, blondes, plaited or braided cords, tassels, meshes, fringes, not intended for shawls or rebosos; galloons, ribbons, passementerie, wall decorations; and any silken ornament not specified; clerical vestments, and vestments for images, with or without adornments of metal, either real or imitation	110.40
Ready-made clothing, wraps, scarfs, gowns, blouses, fichus, cloaks, jackets, vests, coats; masks, ladies' collars, tulle point veils; dresses for men, women, and children, of any kind, with or without ornaments, and all kinds of ready-made clothing not classified; linings for hats, umbrellas and parasols; baptismal headdresses and veils	128.80
Shawls or rebosos, plain, elaborated or embroidered, burato and other materials for the same; tassels, fringes, meshes, and borderings for shawls or rebosos	368.00

	Rate (U. S. currency) per 100 pounds.
Miscellaneous fabrics:	
Haircloth for furniture; linoleum, and other fabrics, coated with rubber or wax for floors; gauzes, with imitation silver or gold thread.....	$5. 52
Cloth, coated with wax or rubber for covering tables or other furniture..	7. 36
Brocades, or tissues, woven, embroidered, or embossed with gold, silver or other metal, real or imitation.....	46. 00
Provisions and beverages.	
Oats, barley, rye, and other unspecified cereals.....	. 18
Wheat, wheaten flour, bran or middlings, malt, maize, beans, pease, lentils, salt, potatoes, onions, garlic, fresh fruit and all garden produce in its natural state.....	. 37
Corn flour, starch, vermicelli, macaroni, and noodles.....	. 74
Vinegar.....	1. 10
Olive oil, pure or imitation.....	1. 47
Sago, tapioca, and other alimentary flours and pastes, not specified, shell fruits, such as almonds, filberts, chestnuts, other nuts, and similar fruits; lard.....	1. 84
Herrings, cod, and other fish, not prepared otherwise than dried, salted or smoked, lavender, bird seed, aniseed, cloves, cumin, coriander seed, pepper, hops, cayenne, caraway, and other flavoring herbs and spices, not specified.....	2. 76
Sugar, honey, sirups without alcohol, of an entirely simple nature, not medicinal; biscuits and crackers of all kinds, dry and sweet; dried fruits without shells, as almonds, dates, prunes, figs and raisins; sardines of all kinds.....	3. 68
Olives, capers, pickles, mustard, dry and prepared, currie, sauces of all kinds, and essences for condiments; vegetables, truffles, mushrooms, butter, margarin, shellfish and other fish not classified; meats of all kinds, prepared and put up in vessels of tin, glass or earthenware, or in brine; fruits preserved in water, as jam, or in spirits; bonbons, pastilles, cocoa in the grain, ground, or in paste, chocolate and other sweets, jams and jellies, condensed milk, extract of meat, rennet for curdling milk; essence or extract of fruit for sirups, without alcohol, nutmeg, tea, coffee, cheese of all kinds.....	5. 52
Cinnamon of all kinds, and vanilla.....	7. 36
Saffron, edible.....	55. 20
Mineral waters, natural and artificial; artificial aërated waters, nonalcholic, as ginger beer, lemonade, soda, sarsaparilla and other similar beverages..	. 18
Beer, cider, must, red and white table wines of not more than 13° centigrade.....	. 92
Heavy wines, as muscatel, madeira, sherry, port, malaga, vermuth, San Rafael, San Miguel, champagne, and others not specified of not more than 20° centigrade.....	1. 84
Liquid stomach bitters, to be taken in wine or liquor, as Angostura.....	7. 36
Spirituous liquors, dry or sweet, as brandy, absinth, rum, gin, liqueurs, cordials, whisky, rosoli, and others not classified, up to 50° centigrade; bitters to be taken with water and sirup, as "Picon" and "Broggi" in ordinary bottles of 1 liter or less.....	7. 36
Surtax upon liquors.....	1. 84
Liquors included in the preceding clause, in barrels or other vessels of more than 1 liter.....	18. 40
Surtax upon the same.....	3. 68

	Rate (U. S. currency) per 100 pounds.
(When the alcholic strength of the wines and liquors specified in the foregoing clauses exceeds the given limit, they will be assessed 55 cents additional for each degree centigrade in excess.)	
Essence for flavoring spirits, as aniseed, coriander, juniper, gin, cognac, rum, absinth, sassafras, cumin, and copalchi	$184.00
Leather, skins, and imitations of the same.	
Leather belts and packing for machinery	.18
Tanned cowhides and sole leather	3.68
Buckskin, sheepskin, buffalo, kid, cordovan, calfskin, enameled leather, pigskin, or imitation thereof, morocco, chamois, and other leathers not classified	5.52
Saddlebags, knapsacks, traveling bags, trunks, valises, and grips of leather or imitation thereof, with or without parts of cotton, linen or cardboard; pocketbooks, cigar and cigarette cases, leather-covered rings, manufactured articles, and leather in any form not specified; undressed sheepskins, fur robes, skins cured with hair or feathers on, cured hides	12.88
Buckskin gloves, gauntlets for driving, fencing and ball playing; visors for helmets and caps; straps of all kinds, plain or patent leather; hatbands, collars, and suspenders, enameled or plain; riding and pack saddles, harnesses, headstalls, halters, straps, covers, holster, reins, bridles, scabbards, and powder flasks	18.40
Belts, of plain or patent leather, with or without gilded or silvered garnishings, for sabers or swords; plain or ornamental belts for ladies	36.80
Gloves, of kid and other fine varieties	46.00
Shoes, boots, gaiters, leggings of any kind, made up or in pieces; mantles, collars and cuffs of fur	55.20
Wood, and manufactures of the same.	
Boats and launches, and oars for the same; wooden buildings; staves, hoops and hoop poles for barrels; pumps, carts, wheelbarrows, pulleys, pipes, beehives; wood for matches, and for wheels of carts and barrows, planks, or other rough lumber, either planed or rough, or tongued and grooved	.18
(The above are exempt from surtax of 55 cents per 100 pounds.)	
Shooks, shoe pegs; blocks for hats and wigs; shoe lasts	.37
Doors, windows, lattices, sashes, unvarnished moldings, frames for embroidery, tackle blocks, plugs	.92
Barrels, set up, for packing or for breweries	3.68
Moldings, gilded, painted or varnished; wooden boxes of all shapes, varnished, lacquered or otherwise, including pill boxes, rough or finished, and boxes lined with paper for confectionery and perfumes; handles or helves for tools, fine or common; squares, gauges, spirit levels, with or without metal parts; wooden bodies of planes, jack planes, groove planes, saddle trees and bows, with or without parts of iron	4.60
Cane, osier, rushes, wicker, bamboo, in any kind of furniture, with or without marble, in pieces ready to be set up; articles and ornaments of wood composition, or papier-maché, such as cardcases, inkstands, vases, trays, dishes, and any other object of the same material, not classified; mattresses, with or without metal parts, veneering for furniture, rings and bars for curtains and hangings; casters or rollers for furniture; trunks, traps; billiard tables without accessories; billiard cues; rammers, covered	

	Rate (U. S. currency) per 100 pounds.
with skin or leather, or otherwise; bootjacks, spigots for barrels, hat-racks, book shelves, stirrups, ferules, napkin rings, hand machines for corking bottles, staves for canes, umbrellas and parasols, tubs or buckets, and all other objects of the same class, not specified; picture frames, gilded or otherwise, whether set up or not, ornaments, toothpicks	$5. 52

Drugs and medicines, chemical and pharmaceutical articles and products.

Vaccine fluids, and serums	Free.
Sulphate of magnesia, (Epsom salts), chalk or carbonate of lime, sulphate of iron, alum, sulphate of soda, muriatic acid, sulphuric, nitric and acetic acid; sulphurous acid, anhydric or hydrosulphuric; caustic soda and potash for industrial uses, lump sulphur	.92
Sulphate of copper; sulphate of zinc; sal ammoniac; medicinal oils, as almond, castor, palma christi, cod liver, pure or in emulsion, henbane, belladonna; soothing sirup; liquid ammonia; spirits of turpentine; unscented vaseline; dextrin, leaves, flowers, buds, unclassified seeds, barks, roots and scrapings; chloride of calcium; flowers of sulphur; milk of sulphur; carbonate and bicarbonate of soda and potassium; medicinal flours, as sago, tapioca, lactated, or other similar kinds, not specified; medicinal wines, as quinine, peptone, pepsin, lacto-phosphate of lime, and others not classified; tar beverages, as "Goudron de Guyot" and others not specified	1. 84
Bromides of potassium, sodium, ammonium, lithium, etc.; phosphates of lime; soda and potassium, not denominated; cream of tartar; tartaric, oxalic and phenic acids; soft extracts, dry or liquid; camphor, balsam of copaiba, manna of all kinds; gum arabic, in lumps or powder; plasters and adhesive cloths; chloroform; sulphuric ether; pastilles, drops, pills, granules; iodides of potassium, sodium, ammonium, lead, etc.; suspensories, trusses, and any other kind of bandages, syringes of all kinds; wafers, insect paper, medicinal cotton of all kinds: medicated wood fiber, nursing bottles, breast pumps, cupping glasses, analytical tubes, retorts; incense, myrrh, and other aromatic gums for burning; medicinal soaps and sirups; salts, as strychnine, aconite, atropine, "eserina" (extract of Calabar bean) digitalis, veratrine, morphine, quassia, cocaine, and other alkaloids; salts of gold, silver, and platinum; sulphate of quinine, and all medicines not specified in the present tariff; medicinal essences, as peppermint, cinnamon, neroli, melissa, bergamot and others not specified	7. 36

NOTE.—In order to pass drugs and medicines through the custom-house, the original as well as the consular invoice must accompany the policy.

Metals, iron and steel.

Steel:	
In bars, rods, sheets or plates	.92
Large saws for sawmills and sawyers, letterpresses	1. 84
Wagon and carriage springs	3. 68
Handsaws, files, rasps, measuring tapes, and other artisans' tools, not specified	4. 60
Wire, unclassified	5. 52
Wire woven, springs for mattresses and furniture	7. 36
Strings for musical instruments	11. 04
Pens, for writing	14. 72

	Rate (U. S. currency) per 100 pounds.
Steel or iron, in agricultural machinery, iron vessels for shipping balsam; scientific instruments not specified; barbed wire for fences, with its hooks and stretchers; plows; surgical instruments with or without cases.....	Free.
Steel or iron, in galvanized sheets with zinc, for roofing, screws and washers for the same, ridge caps, galvanized with zinc, tanks, reservoirs, steam and water pipes, whether tinned or not; chains for use of ships or carts, surveyors' chains; pulleys, lifting jacks, large presses for industrial purposes, tackle blocks, rowlocks, bearings, speaking trumpets, washers and plates for wheels with tires of 2½ to 3 English inches in width, and half an inch in thickness, wheels and washers for wagons; axles, hand cars, rails, and spikes for the same, hoops and bands for barrels or other uses, grate bars for boilers, machinery of all kinds for manufacturing purposes, motors, with any kind of power, water tanks, bee keepers' masks, magnets, lithographic presses, horserakes, cables of iron, steel or brass wire; portable forges, anchors and hawsers; riveted kettles when their weight exceeds 30 kilograms each; molds for sugar, (the foregoing being exempt from 55 cents surtax).....	$0.18
Iron:	
In bars, rods, plates and sheets.....	.37
In the form of sheet tin.....	.55
Iron, cast, in cook stoves, ovens, cooking utensils, vases and pots for plants and flowers, portable stoves, mortars, handmills for coffee or for other uses, hand pumps, letterpresses, platform and counter scales and steelyards; unspecified machines, operated by windlass, capstan or pedal, with the exception of those for agricultural purposes; statues, shoe lasts, sad irons for tailors and for laundries, weights...	.92
Iron, cast, in safes, common wire nails, nails for tires and horseshoes, brads, tacks and small nails of all kinds not specified, cradles, beds, cots, stools, sofas, brackets, tables, shelves, and other furniture of the same kind; lattices or gratings, balconies, balustrades, and exterior adornments for buildings; kettles of 30 kilograms or less in weight, anvils, vises, hammers and pincers for blacksmiths, bottle holders, rat or mole traps, screws or foot presses for bench or table; rivets, candlesticks, stone breakers' hammers, spikes and screws for the same, mattocks, ferrules or holders for securing axles; shovels, spades, picks, hand rakes, crowbars, scythes, sickles, pruning shears, plow points, and other similar rough tools, not specified; horseshoes, and unclassified chains; thin sheets, tinned or otherwise, perforated for seives.....	1.84
Iron or steel in picks, bars, axes, drills, punches; beds, cradles, cots, sofas, brackets, tables, shelves, and similar furniture ornamented with other metal; hanging steelyards, and other scales not specified, spigots for casks.....	2.76
Iron wire woven, cooking utensils that are not cast; tinned nails and tacks of all kinds; tinned buckles of all kinds for harness and saddles; curry-combs, tinned or enameled cast iron, or galvanized with zinc in pitchers, tubs, buckets, foot and body baths, pipes and gutters for roofs, and other similar objects for domestic and other uses.....	3.68
Manufactured articles of thin tinned sheet iron will be dutiable as tinware.	

	Rate (U. S. currency) per 100 pounds.
Iron or steel, as pincers, adzes, braces, bits, augers, gravers, gimlets, trepans, drills, chisels, gouges, jack planes, planes, groovers, and blades for the same, tinners' shears, unclassified hammers, hatchets, punches, steels, wrenches, screw wrenches, pipe wrenches, screw-drivers, levels, squares, rasps, plumbs, compasses, pliers, nail pullers, apparatus for loading cartridges, and other unspecified tools, with or without wooden handles, for artisans; lamps, lanterns, and their accessories; cast or forged, enameled or varnished kitchen utensils, basins and washing sets, water pitchers, coffeepots, milk cans, fountains, plates, tumblers, cups, boilers, forks, ladles, bath tubs, spittoons, chamber pots, water pipes, candlesticks, and other articles for domestic and other uses	$4. 60
Iron or steel in cages, fly screens, and other objects of wire, not classified; locks or fastenings for furniture, hinges and screws, key rings, keyhole plates; bootjacks, grips, handles, and other iron fittings for doors, windows, and furniture, not specified; stirrups, trunks, the same when lined with iron, iron buttons, flowerpots not classified; images, toys, tips for shoes, fruit squeezers, spatulas; pointed knives with handle of wood, bone, or horn, can openers, single-bladed penknives, with handles of wood, bone or horn; machetes, daggers, table sets, (knives, forks, and spoons) unclassified	5. 52
Iron or steel in locks and fasteners for doors and windows, scissors of all kinds not classified, hair-cutting machines; tinned or japanned articles, as waiters, sugar bowls, trays, cash boxes, basins, water pipes, table casters, fountains, fruit stands, sprinklers, and other tinned or enameled ware for domestic or other uses	7. 36
Iron or steel, in bits, curbs, spurs, collars for animals, thimbles, fishhooks, corkscrews, nutcrackers, roller skates, velocipedes or bicycles and their accessories; wrought or cast, manufactured nickel-plated objects of any kind, not specified	9. 20
Iron or steel, in pins, common or large, hairpins, of any form and kind not specified; machetes and daggers, unclassified, with leather scabbards; pen and pocket knives of whatever kind, unclassified; clasps, brooches, eyelets, needles of all kinds and sizes, tinder boxes and steels, weavers' combs, bands	11. 04
Iron or steel in frames for umbrellas and parasols, with or without canes	18. 40
Iron or steel in poniards, swords and sabers of all kinds, not classified, with or without common metal scabbards	27. 60
Iron or steel in knives, machetes, daggers, swords, sabers, poniards, pen and clasp knives, razors, with or without scabbards, table knives, forks, spoons, with handles of ivory, mother-of-pearl, tortoise shell, silver, gilded or silvered metal, or aluminum	36. 80
NOTE.—Iron or steel, coppered, or galvanized with copper or bronze, will be dutiable as bronze and copper.	
Aluminum.	
In bars, sheets, and wire	9. 20
Pens, for writing	14. 72
Table services, and objects not specified	36. 80

Bronze, copper, and brass.	Rate (U. S. currency) per 100 pounds.
Bronze, scientific instruments of the same, not specified	Free.
Bronze and copper or brass in kettles weighing more than 40 kilograms, counters or checks, for use of farmers, etc., apparatus for distilling spirits (may only be imported by special permission of the Minister of Finance)	$0. 18
(The above are exempt from surtax of 55 cents per 100 pounds.)	
Bronze, copper and brass:	
In bars	1. 84
In plates, large and small, sheets, solder, and bearings	3. 68
In kettles of 40 kilograms or less in weight, bells of 15 kilograms or more; sinks or reservoirs; lamps and lanterns, with their parts and accessories	4. 60
Wire, nails, tacks, brads, screws and nuts, washers, candlesticks, soldering irons, mortars, hinges, knobs for furniture, saddle mountings, doorknobs, bolts, rollers and small wheels for furniture and windows	7. 36
In distilling apparatus (not for spirits)	9. 20
(May be introduced only by permission of the Minister of Finance.)	
In locks and fastenings for doors and windows, and for furniture, ornaments of all kinds, holders for curtains, rings, hooks, balances, compasses, padlocks; furniture, springs for the same, beds, cradles, bolts, crosses, bells, of 15 kilograms or less in weight, hand bells, hand holds, cow bells, chains, plumb weights, spurs, stirrups, shelves, figures, images, flowerpots, hasps, railings, weights, spigots for casks, oil cans, links, candlesticks, woven wire, cages, and other articles of wire, office utensils, cooking and other domestic utensils, buckles, brooches and clasps, thimbles, eyelets, shoe tips, collars for animals, large pins or prongs, not specified, leaf, and books of the same, unclassified jewelry, alphabets and numerals for marking, weavers' combs, hoops and bands, and in any form not specified	11. 04
Nickel plated, for any purpose	18. 40
Bronze, copper or brass jewelry, imitation of gold, placquered, plated or gilded	36. 80

Other metals.

Tin, pure or mixed:	
In bars, sheets, or soldering bars	1. 84
Manufactured articles for domestic or other uses, toys, capsules for bottles, tin foil for wrapping	5. 52
Babbitt, and white metal in blocks	3. 68
White metal and German silver, in objects not specified and all kinds of metal ware; nickel, in table services and other unclassified objects	18. 40
Nickel for galvanizing and other purposes	3. 68
Gold:	
In bars, dust or coin	Free.
Manufactured in leaf, powder or liquid for gilding	147. 20
Jewelry, with or without precious stones, pens, medals, thimbles, pencil cases, ornaments for churches and other purposes	184. 00

	Rate (U. S. currency) per 100 pounds.
Silver:	
In bars, dust, or coined	Free.
Manufactured in leaf, powder, or liquid for plating or painting, table services, jewelry, common for churches, and other objects not specified	$36.80
Platinum, in powder or solid	Free.
Pewter, manufactured in spoons, ladles, forks, and other domestic objects	5.52
Lead:	
In bars	.37
Manufactured—	
In sheets or pipes, for roofs	.74
Shot or bullets	1.48
Toys or other objects not specified	5.52
Plated ware, of steel, iron, copper, bronze, brass, nickel, or white metal, plated or gilded, as tea or coffee sets, trays, cream jugs, tea and coffee pots, plates, dishes, napkin rings, spoons, ladles, knives, forks, sugar tongs, fruit stands, preserve and butter dishes, saltcellars, vases, candlesticks, cruet stands, cuspidors, pitchers, basins, cups, bowls, purses, inkstands, crucifixes, crosses, cigarette cases, stoppers, cardcases, flowerpots, bells for animals, hand bells and other objects of gilded or plated metal not specified	36.80
Zinc:	
In bars, sheets, or plates	1.10
Perforated sheets	1.84
Manufactured in ornaments, bronzed statues or figures, alphabets and numericals for marking; articles for domestic and other uses	5.52

Paper and cardboard.

Paper, printing, for periodicals, without finish or gumming, music paper, pieces of music, printed books and pamphlets, loose or bound periodicals, almanacs in book form, circulars and advertising matter relating to commercial articles or specialties, (exempt from surtax of 55 cents per 100 pounds)	.18
Paper and cardboard in sheets for binding, lithography, photography, and other commercial purposes, tarred paper for roofing	.18
Paper and common cardboard, brown or otherwise, for wrapping, blotting, or filtering	.55
Paper or cardboard in empty cases and covers for packing, drawing models, geographical maps and charts	.92
Paper or cardboard, sanded, of all kinds	1.10
Paper or cardboard, white or colored, without gumming or gloss finish, for printing, not specified; common paper for wrapping, colored, and for paper flags	1.84
Paper, writing, of all kinds, blank books of all sizes, ruled or otherwise, not specified; paper and cardboard for flowers, drawing, and copying, blank labels and cards	3.68
Paper, wall, marbled or painted, for book covers or other uses	4.60
Paper for cigarettes of all kinds; envelopes, calendars with detachable dates, perpetual calendars; tickets, labels, and cards, printed, engraved, or lithographed; blank forms, loose or bound, for drafts, receipts, consignment notes, pay rolls, accounts, invoices, and in general all printed matter, engraved or lithographed, to be filled in by handwriting; paper	

	Rate (U. S. currency) per 100 pounds.
and cardboard in pocketbooks, cigar and cigarette cases, ornaments of all kinds, masks, lanterns, lamp shades, balloons, images, frames, moldings, transfer scraps, and domestic objects, or in any form not classified...	$5.52
Paper, gilded, silvered or enameled, for flowers and similar objects.....	9.20
Paper, parchment, in sheets or manufactured; playing cards, fine or common, shirt fronts, collars and cuffs.....	11.04
Books, printed, lithographed or engraved, with covers of velvet, plush, tortoise shell, mother-of-pearl, ivory, gutta-percha, celluloid or metal.....	18.40
Miscellaneous articles.	
Albums:	
With covers of common paper, cloth or cardboard.....	11.04
With parts of any other metal not specified.....	18.40
Animals, live, not specified; domestic fowls, and dissected animals (with the exception of cattle, etc., from the neighboring republics).....	Free.
Apparatus, gymnastic and calesthenic.....	1.84
Apparatus and pumps for extinguishing fires.....	Free.
Apparatus for reproducing manuscript.....	1.84
Articles for office use, not classified.....	11.04
Articles, apparatus, tools and materials, not specified, for dentists, including artificial teeth.....	36.80
Articles, apparatus, tools and materials, not specified, for watchmakers, jewelers, and silversmiths, including watch glasses.....	18.40
Articles and apparatus, not classified, photographic.....	7.36
Articles and apparatus, machinery, tools, and materials, not specified, for printing offices, railroads, piers, telegraphs, electric light, and for producing light by means of carbonated hydrogen, acetylene, and other gases, (exempt from surtax of 55 cents per 100 pounds).....	.18
Asbestus, and amianthus for machinery.....	.18
Baggage, free of all duties and taxes up to 100 kilograms (220.46 pounds), providing it bears evidence of having been in use; unused articles, and all excess without invoice will be assessed per 100 pounds.....	55.20
Furniture and household effects will not be considered as baggage, even though they have been used, nor will unused articles, on which the duties are more than $55.20 per 100 pounds.	
Balls, small, of stone, wood, glass, china, or common metal unclassified, for children's games.....	1.84
Baskets:	
Large or small, of wicker, rush, reed, or straw, without any adornment or lining of other material.....	5.52
The same with adornments or lining of other material.....	11.04
Bone or horn, and manufactured objects of the same, not classified.....	11.04
Bricks and tiles, of clay or other unspecified materials, fireproof brick and clay, (exempt from 55 cents surtax).....	.18
Brushes, and brooms of straw or esparto, of all kinds.....	.92
Brushes for shoes, horse brushes, and other similar common brushes.....	2.76
Brushes for clothes and hats; hair, tooth, and nail brushes, table brushes and others similar; hair brooms, mounted in wood, bone, or horn.....	11.04
The same objects, mounted in tortoise shell, mother-of-pearl, ivory, aluminum, silver, and gilded or plated metal.....	36.80
Buckles, of all kinds and materials, not specified.....	11.04

	Rate (U. S. currency) per 100 pounds.
Buttons:	
Of bone or horn, common, not specified, of all kinds	$5.52
Mother-of-pearl	11.04
Silver, plated or gilded	36.80
Cane, wicker, and bamboo for furniture	1.84
Canes, walking, with or without swords, and riding whips, with handles of any unclassified material	36.80
Caps and nipples for guns and pistols	11.04
Carbide of calcium	Free.
Carbolineo avenarius	.18
Carriages or coaches of all kinds, or any parts of the same, hand trucks for mechanical pianos; bath chairs, and baby carriages	3.68
Cartridge cases, empty, of cardboard and brass, for shotguns and pistols	11.04
Cases, for instruments, of all kinds, with or without contents; and hampers packed with provisions	36.80
Casters of all kinds, with or without glass cruets, not specified	27.60
Celluloid, in manufactured objects, or any form not specified	11.04
Cement:	
Roman or Portland	Free.
In tiles and bricks, (exempt from surtax of 55 cents per 100 pounds)	.18
Charcoal, for drawing	11.04
Clasps, of common metal wire, loose, or attached to belts, hooks and eyes	11.04
Clocks:	
Table, wall, and any other kinds, not specified	9.20
Tower	4.60
Coal:	
Lump, coke, animal and vegetable carbon in lumps	Free.
Dust, for industrial purposes	.92
Combs:	
Large, small, fine tooth combs, wool combs, hairpins, and similar objects for hair dressing, not specified	11.04
The same, in ivory and mother-of-pearl	36.80
The same, in tortoise shell, with or without gold mounting	55.20
Coral:	
In bulk	18.40
Manufactured in any form, not mounted in gold or platinum	36.80
Cordage, for the use of vessels in the ports, lakes and rivers of the Republic, (exempt from surtax of 55 cents per 100 pounds)	.18
Cork in bulk, stoppers, or any other form not specified	11.04
Crockery, in pieces for domestic service, and other forms not specified, (by crockery is understood nontransparent ware)	1.47
Crosses, or crucifixes of common materials, not specified	11.04
Crowns, garlands, crosses, and other adornments for tombs, whether of glass, porcelain, or common metal, with or without statuettes	11.04
Crucibles for foundries (exempt from surtax of 55 cents per 100 pounds)	.18
Curtains, of bamboo, curtains or screens of straw or esparto for doors or windows, window blinds or shutters of wood, painted or not; the same, of painted cloth, waxed, oiled, or varnished, with or without springs; plain or with patterns	11.04
Diamonds, mounted, for cutting glass	36.80
Dolls and images of all kinds, not specified	5.52

	Rate (U. S. currency) per 100 pounds.
Dummies of wood, cloth, or skin, filled with sawdust or other common material; of paste, celluloid, or other common composition, for tailors, dressmakers, barbers, and hatters	$1.84
Effects, introduced by foreign diplomatic ministers resident in the Republic, when there is reciprocity on the part of the foreign countries they represent, and when the legal requisites are complied with	Free.
Emery, in powder for silversmiths, and other uses	1.84
Enamel, in leaves or sheets	18.40
Epaulets:	
Of silver or silver plated	36.80
Of gold or gold plated	92.00
Fans:	
Of paper, palm, rush, cardboard, waxed cloth, with or without wooden frames, bearing announcements or advertisements	1.84
The same, without announcements or advertisements	5.52
With frame of any unclassified material	36.80
With frame of ivory, tortoise shell, mother-of-pearl, or metal	73.60
Fancy boxes:	
Of wood, cardboard, delft, porcelain, or glass, lined or covered with pure silk or mixed, velvet, or other fine material, plain, or ornamented with bordering, braided cord, corners of common metal, ivory, celluloid, mother-of-pearl, shells, with or without painted figures, with or without common metal ornaments	11.04
Containing paints, in cakes or in paste	5.52
Feathers:	
Of all kinds for ornamental purposes, collarettes, collars and cuffs of the same, dissected birds for hats	92.00
For pillows	18.40
Dusters of all kinds	18.40
Feathers and puffs, for toilet powder	7.36
Fertilizers of all kinds, natural or artificial, guano	Free.
Filters, and distilling apparatus of all kinds	Free.
Firecrackers, Chinese	3.68
Fireworks, not specified	16.56
Flasks, traveling, of glass, siphons, covered with leather, wicker, gutta-percha, cloth, or common metal, with or without straps or cords	5.52
Flowerpots, stands, vases, plates, flasks, and similar articles of delft, porcelain, clay, or terra cotta, marble, alabaster, poryphry, jasper, and similar materials with inseparable parts of coarse metal	5.52
Flowers:	
Artificial, of cotton or any other material not specified	110.40
Prepared material for the same, of all kinds not specified	27.60
Fragments of wrecked vessels	Free.
Fuses, for powder and dynamite	11.04
Galloons, or threads of silver or gold, pure or imitation, with or without tassels; lace, fringes, and braid of silver or gold, real or false	46.00
Glass and crystal ware, as bottles, common and large, empty demijohns	.18
Glass:	
Flasks of plain glass, smooth	.55

Glass—Continued.	Rate (U. S. currency) per 100 pounds.
Syphon or other bottles, with tops of tin or other metal, glass tiles, window panes, clear or colored, without painting, patterns, or tin mountings	$0. 92
Hollow ware, as tumblers, glasses, carafes, flower stands, flasks, and other objects that may have inseparable parts of common metal, mirrors, with or without frame, toys, statuettes, and buttons	5. 52
Lenses, for telescopes, photography, panoramas, and similar uses	11. 04
Globes, and spheres, terrestrial and celestial	. 18
Glove fasteners	11. 04
Glue:	
Of all kinds, in lumps	1. 84
Liquid or prepared	3. 68
Graphite, or plumbago, in powder	1. 84
Grease, axle, for machinery	1. 84
Gutta-percha, same as rubber.	
Gypsum, or chalk:	
For the use of schools	Free.
For billiards	1. 84
Gypsum, calcined, in powder, (plaster of paris)	. 37
Gypsum, or stucco work, in figures, models, and any other forms unspecified	5. 52
Hair:	
Horse, loose, or in any form not classified	5. 52
Human, or imitations thereof, in bulk or in ornaments	184. 00
Of rabbits and hares, for hats	Free.
Hats and caps of all kinds not classified, for men, women, and children, plain or ornamental	27. 60
Hay and other forage, (exempt from surtax of 55 cents per 100 pounds)	. 18
Horns, in bulk	. 18
Illuminating articles, chandeliers, lamps, lanterns, of metal, glass, crystal and porcelain, with all their accessories, as holders, bottoms, brackets, stands, burners and wicks, chimneys, globes, shades, and reflectors of glass, porcelain and common metal	4. 60
Images of all kinds, and common materials, not specified	5. 52
Ink:	
For printing or lithographing	Free.
Writing, marking, and for stamps	1. 84
Indian, or Chinese, in cakes, for drawing	11. 04
Instruments:	
Musical, as pianos, harmoniums, organs, organettes, accordeons, and concertinas of all kinds and sizes	3. 68
Mouth organs, dulcimers	5. 52
Musical boxes of all kinds, (excepting organettes), and other musical instruments of any kind, not classified	7. 36
Scientific, of all kinds not specified, assaying furnaces	Free.
Instruments, as microscopes, thermometers, barometers, metrometers, hydrometers, marine compasses, alcohometers, aërometers or spirit testers, salt gauges, etc., cinematographs, phonographs, gramophones, telephones, electric bells, magic lanterns, stereoscopes, and others of a similar kind, and parts for the same	5. 52

	Rate (U. S. currency) per 100 pounds.
Ivory:	
In bulk	$18.40
Manufactured, in all kinds of unclassified objects	36.80
Jet and agate, manufactured in any form not specified, and also imitations of the same	11.04
Jewelry:	
Common, of copper and other materials, not specified	11.04
Imitation of gold, placquered, plated, that will stand the aqua fortis test; the same for use of churches	36.80
Of gold and platinum; precious stones, and fine pearls	184.00
Lava will be dutiable the same as glass.	
Leeches	.74
Limbs, artificial, of any form and material	7.36
Lime, slaked or quick	.37
Litharge	.37
Litholinite, (exempt from surtax of 55 cents per 100 pounds)	.18
Looms of all kinds	Free.
Machinery, heavy, of all kinds not specified, (exempt from 55 cents surtax)	.18
Machines, electrical, small; writing machines, typewriters	5.52
Marble, alabaster, porphyry, jasper, granite, and similar forms of stone, in slabs for furniture; in bricks, slabs for inscriptions, fountains and pieces for the same	.37
Materials, primary, introduced by manufacturers of soap and candles; stearin, paraffin, olein, cocoanut oil, palm oil, resin, pitch, caustic soda and potash, soda ash, silicate of soda, common wrapping paper, and wicks	.55
Matches, of all kinds	3.68
Matting, of rush, straw, cocoanut fiber, palm leaf, or other similar materials, not specified	1.84
Measures, of all kinds, not classified	4.60
Mercery, such as glass beads, bugles, garnets, seeds, tubular beads of glass or common metal, of all forms and thicknesses, ground glass, spangles, gilded, silvered or enameled, imitation pearls made from wax, paste, or glass, and all other kinds of mercery not denominated	11.04
Mica, in powder or sheets	.92
Mineral slag	.18
Mining apparatus, iron machinery and accessories, including pumps, motors, bearings, belts and pulleys of all kinds, iron bench screws, winches, anvils, forges, iron chains, steel cables, rails, tubs, capstans, and other apparatus that may be necessary; rock coal, powder, dynamite, large scales, (4 or 5 tons' capacity), octagonal steel for drills, etc., machine oil, miners' lamps, picks, chisels, hammers, and sledges for breaking minerals, hand cars, chemical products for use in casting, assaying and analyzing, crucibles, mortars, furnaces, scales, capels of argil, small scales for laboratory use, fire brick and quicksilver	Free.
NOTE.—In order to have the foregoing admitted free, as mining apparatus, an order must be obtained from the Minister of Finance.	
Models and patterns of machinery, buildings, and for industrial uses, molds for making flowers	.18
Mother-of-pearl:	
In bulk	3.68
In any form not specified	36.80

	Rate (U. S. currency) per 100 pounds.
Oils:	
Gasoline	Free.
Kerosene, petroleum, and naphtha	$1.10
Whale, fish, rape-seed, linseed, cocoanut, palm, cotton-seed, and machine oils of all kinds	1.47
Packing, for valves and other parts of machinery, not specified	.18
Paint:	
In powder, common, unspecified	.92
Mixed, not classified, Prussian and ultramarine blue, white lead, red lead, and vermilion	1.84
Aniline, flower of saffron, cochineal and purpurine for dyeing	11.04
Parchment, in any form, or imitations thereof	11.04
Paraffin:	
In cakes	1.84
Manufactured in any form	3.31
Pencils, with cases of wood or cardboard, and crayon for drawing	5.52
Perfumery of all kinds not classified, soaps, oils, pomades, cosmetics, toilet creams and tints, rice and other powders, perfumed, with or without puffs; scented waters, as Florida, cologne, divine, kananga, lavender, melissa, and other similar waters; Barry's Tricofero, oriental tonic, bay rum, and all kinds of perfumery not specified; extracts and essences	7.36
Photographs and portraits:	
Without frames	1.84
With frames	5.52
Pictures, of all kinds and materials, with or without frames	5.52
Pillows, and mattresses:	
Of wool, horsehair, or other unspecified material	8.28
Of feathers	27.60
Pipes and cigar holders for smokers, of any common materials, not specified	11.04
Pipes and cigar holders, of meerschaum, or amber, and imitations of the same; meerschaum and amber, manufactured in any form	36.80
Pitch, and rosin, coarse	.92
Plants, live	Free.
Poison, for hides	.18
Porcelain, in any form not specified, (transparent crockery ware)	2.21
Powder, for polishing metals	5.52
Powder flasks, of bone or horn	11.04
Quicksilver	.18
Revolvers, and breechloading pistols, (caliber less than .44)	92.00
Rubber:	
In belts or pieces for machinery, packing for valves and boilers	.18
In bulk, or manufactured in mats	1.84
Hose or pipes for water	5.52
In childrens' toys, jewelry, and other unspecified objects	11.04
Cloaks or other garments, shoes, boots, and leggings, sweat pads for armpits, billiard cushions, cord for catapults, etc	18.40
Rushes:	
Straw or palm, for furniture and hats, plain, unworked, dyed, or otherwise, and wicker for furniture	1.84
The same, worked into braids, or cords, or woven, for hats	11.04
The same, in hammocks, or other forms not specified	9.20

	Rate (U. S. currency) per 100 pounds.
Samples, of merchandise, that have no commercial use or value, (exempt from surtax of 55 cents per 100 pounds)	$0. 18
Sand cloth, dutiable same as sandpaper.	
Scapularies, of all kinds and materials	55. 20
Screens:	
With wooden frame and paper body, of all kinds	3. 68
Entirely of wood, painted or varnished, with or without mirror	4. 60
With body of cotton or linen, plain or worked, without embroidery	5. 52
With body of woolen cloth, plain, silk embroidered, or beaded	11. 04
With body of woolen cloth, ramie, or silk, plain or embroidered with imitation gold or silver thread	18. 40
Seaweed for mattresses or other uses	. 37
Seeds, garden, flower, and agricultural, of all kinds not classified as medicines or provisions	Free.
Sets of amusements, as panoramas, dioramas, merry-go-rounds, Noah's arks, football, baseball, cricket, lawn tennis, and others of a similar nature	1. 84
Sets of chess, dominoes, policy, checkers, pegging boards, solitaire, and similar games, with their respective counters	5. 52
Shells, loose or mounted, or worked in any way	11. 04
Ships, vessels, and their accessories, for use in the ports, lakes, and rivers of the Republic, (exempt from surtax of 55 cents per 100 pounds)	. 18
Shoe polish, liquid or in paste, of all kinds	1. 84
Shoe horns, of bone or horn	11. 04
Shotguns, and pistols, muzzle-loading, with or without accessories	18. 40
Shotguns, breech-loading, and hunting rifles	36. 80
(Hunting rifles may only be introduced by permission of Government.)	
Shreds of metal, luster, and enamel for embroidery	46. 00
Sinks and water-closets of all kinds	. 92
Slates and slate pencils, of slate or cardboard, for use of schools	. 92
Slippers, Chinese, of straw, shoes with hempen soles	12. 88
Soap:	
Common, unscented, for washing	1. 84
Perfumed, and soap for polishing metals	7. 36
Soapstone for tailors	11. 04
Spars, mineral, limespar, fluorspar, feldspar	. 92
Spectacles, and eyeglasses, lenses, mounted with any unspecified material	11. 04
Spectacles and eyeglasses, lenses, mounted with ivory, tortoise shell, silver, plated or gilded metal, or aluminum	36. 80
Spectacles, field and opera glasses:	
Mounted in any unspecified material	36. 80
Mounted in ivory, tortoise shell, silver, aluminum, plated or gilded metal	73. 60
Spectacles and eyeglasses, mounted in gold	184. 00
Sperm:	
Crude	3. 68
Manufactured in any form	5. 52
Sponges of all kinds	92. 00
Statues:	
Of marble, alabaster, and similar stone, of clay or terra-cotta	. 37
Of unclassified materials, (by statue is understood figures of 80 or more centimeters in height)	5. 52

	Rate (U. S. currency) per 100 pounds.
Stearin:	
In bulk	$1.47
Manufactured in candles and other forms	3.31
Stones:	
Oil, for sharpening razors, etc., grindstones for tools	.37
For grinding corn, etc., (exempt from surtax of 55 cents per 100 pounds)	.18
Flint, and lithographing stones	.92
Precious, unmounted, are dutiable the same as gold jewelry.	
Straw casings for packing bottles	.18
Strings, of all kinds for musical instruments	11.04
Strops of all kinds	11.04
Tar and asphalt	.37
Talc	.92
Tallow:	
In bulk	.55
Refined or compressed	.92
In candles	2.76
Tents, field, including frames	4.60
Thimbles of any material, not classified	11.04
Tobacco:	
In leaf	9.20
In any form not specified	27.60
Tortoise shell:	
In sheets or unmanufactured	18.40
Manufactured in any unspecified form	55.20
Tow for calking	.18
Toys of all kinds, not specified	5.52
Varnishes of all kinds	3.68
Wafers for letters	.74
Watch chains or guards, holders for pens, pocketbooks, cigar cases, necklaces, match cases, pencil cases, toothpicks, cuff buttons, or sets of buttons for shirts, medallions, purses, bracelets, and rosaries of any common material, not specified	11.04
Watches:	
Of any unspecified class	36.80
Of silver, and various imitations of gold, gold plated	92.00
Gold	184.00
Wax:	
Of bees, or vegetable, white or yellow, unmanufactured	11.04
Candles, flowers, fruits, and in other forms not specified	5.52
Sealing—	
Common, for bottles	1.84
For letters, etc	11.04
Whalebone, manufactured or otherwise	9.20
Workboxes:	
Small, with or without accessories	27.60
Large. (See Furniture.)	

PROHIBITED ARTICLES.

Apparatus for coining money.

Arms and other elements of war, including rifles of all kinds, and revolvers of .44 caliber with their respective cartridges.

Explosive cartridges.
Obscene prints, figures and other objects, which will be destroyed at once in the presence of the collector.
Air guns.
Nitrate of potash, or saltpeter.
Nitrate of baryta, and nitrate of strontian, in quantities of more than 5 kilograms net.
Nitroglycerin and dynamite, except by special concession from the Government, loose powder of all kinds, and caps for dynamite.
Roulette wheels of all shapes and kinds.

When the Government, in exceptional cases, permits the importation of prohibited articles, they shall be dutiable as follows:

Hunting rifles	$36.80
Cartridges, loaded:	
Less than .44 caliber	11.04
Of .44 caliber	18.40
Dynamite, caps for the same, and powder	11.04

NATURAL PRODUCTS AND OTHER ARTICLES FROM THE CENTRAL AMERICAN REPUBLICS.

Are free of duties, and will only pay the established taxes on foreign imported goods, with the exception of the following articles, which will pay, in addition to said taxes, the established duties, calculated on the following basis of assessment:

Foot wear of all kinds	$27.60
Riding and pack saddles, sidesaddles for ladies	9.20
Sole leather and leathers for saddle rolls	1.84
Leather of all kinds, with the exception of the foregoing	2.76

Cattle will pay duties and taxes as follows: Neat cattle, $2 per head; horses, mules, etc., $3; hogs and swine, 50 cents.

Tobacco in any form, will pay 55 cents per 100 pounds, instead of the 30 per cent tax on foreign merchandise; tobacco in the leaf will also be exempt from the surtax of 55 cents per 100 pounds.

Cereals, provisions, and earthenware, shall be free of all duties, taxes and costs, when imported in small quantities by land.

SURTAXES (IMPUESTOS).

ART. 573. Surtaxes will be levied upon importation policies as follows, per 100 pounds:

	Cents.
For the judicial power	18
Central Railroad bonds	28
Importation and exportation bonds	37
Subsidy of steamers	9
For public revenues, (cash)	55

ART. 574. Surtax upon liquors in default of license, $1.84 per 100 pounds gross.

ART. 575. Surtax upon liquors, in favor of public charities, $1.84 per 100 pounds gross, when contained in vessels of not more than 1 liter in capacity; and $3.68 per 100 pounds in barrels or other vessels of more than 1 liter in capacity.

ART. 576. Further, 30 per cent will be charged upon the total duties, in cash, for public charities, which will be distributed at the discretion of the Government.

ART. 577. The articles expressly stipulated in the foregoing tariff, are exempt from the tax of 55 cents per 100 pounds.

ART. 578. All articles to be admitted free, shall be exempt from all duties and taxes, and will pay only the custom-house costs.

CUSTOM-HOUSE COSTS.

ART. 579. The custom-house costs are: Storage, labor, and policies.

Storage.

ART. 580. For the first four months or part thereof, 9 cents per 100 pounds; for the second similar period or part thereof, 28 cents per 100 pounds. Storage will be charged from the day on which the goods are disembarked.

ART. 581. Merchandise that may be reembarked will pay double storage.

Labor.

ART. 582. Flour, and free articles, per 100 pounds	$0.027
Rough lumber, per 1,000 feet	.24
Drugs and acids, per 100 pounds	.09
Merchandise not included in the present tariff, per 100 pounds	.07
Silk:	
Unwoven, or in yarns, per 100 pounds	.11
In shawls, cloth or other forms, per 100 pounds	.13
Wines, liquors, mineral and aërated waters, per 100 pounds	.054

Policies.

ART. 583. Deposit policies, for every 100 pounds or fraction thereof	.0037
Making out policy	.50
Making out set of policies, (duplicates)	1.00

ART. 585. Live animals are exempt from paying costs of labor and storage.

SPECIAL DEPOSITS.

ART. 586. The following articles can not be admitted to the national warehouses, and may only remain on deposit three days: Acids, alcohol in wooden vessels, dynamite, ether, matches, fireworks, including Chinese crackers; explosive caps; gasoline; kerosene; naphtha; powder; petroleum; saltpeter; carbide of calcium; liquid sulphide of carbon; machinery, with the exception of hand or foot power machines, water pipes, barbed wire; iron roofing; and all packages of great weight or large bulk.

ART. 587. The following articles, by reason of their inflammable or perishable nature, may not remain in deposit more than two months: Oils in wooden vessels; toilet waters containing alcohol; spirits in wooden vessels; spirits of turpentine; camphor; tar; pitch; sulphur; loaded cartridges; stearin; olein; paraffin; resin; tobacco in any form; olives in wooden vessels; garlic; lavender; almonds in sacks; conserves; sweets; chocolate; vermicelli; dried fruits; starch; aniseed; bird seed; sugar in sacks; biscuits; flour; hams; fresh vegetables; lard; potatoes; roots; cheeses; and other foods and condiments which either by reason of the packing, or nature of the contents, are liable to become decomposed.

SPECIAL DISPOSITIONS.

ART. 588. All duties and taxes established by the present tariff will be charged upon the gross weight, with the sole exception of cattle imported from the neighboring republics.

ART. 589. All persons or associations that desire to open or keep open, public

commercial establishments, must register in the general treasury; and the marks which they use on the packages which they import, shall be registered in all the custom-houses of the Republic.

ART. 590. All goods must be invoiced under the names specified in the tariff, giving also the species to which the goods belong, as satin, Irish goods, damask, etc.; further, the material must be specified, as cotton satin, or woolen satin; Irish linen goods, or cotton goods, etc.; otherwise the declaration will be considered incomplete.

In the case of unclassified goods, or when any person has ordered goods not mentioned in this tariff, samples of the same must be submitted to the respective minister for classification.

ART. 591. In cases where it may be necessary to apply a duty to articles or manufactures of coarse or fine materials, and said materials are not expressly specified in the respective section of the tariff, the following will be considered as coarse materials:

Steel and iron; bronze and copper; brass; tin; white metal or German silver; nickel-plated metal; nickel; pewter; lead; zinc; bamboo; rush; cane; esparto; wicker; reed; palm; straw; wood; wood pulp; cork; pasteboard; paper; parchment; leather; horsehair; bone; horn; whalebone; "corozo" (African palm nut); celluloid; wax; cerin; rubber; gutta-percha; crystal; glass; lava; clay; terra cotta; earthenware; porcelain; cement; stucco; gypsum; alabaster; granite; jasper; marble; porphyry; and similar stones; agate and jet.

And the following as fine materials:

Aluminum; silvered or gilded metals; silver; platinum; gold; amber; tortoise shell; mother-of-pearl; coral; meerschaum; ivory; human hair; fine pearls and precious stones.

ART. 592. Articles or materials that are introduced as accessories of machinery or apparatus, will only be assessed as such in such quantities as may be necessary to commence operations; those that may be imported afterwards, under the same denomination, and the surplus, if any, in the first instance, will be assessed as set forth in the tariff.

ART. 593. In every package that contains articles of various kinds, which are appraised differently, the tare shall be calculated in relation to the total of the charges on the contents; this proportion will be found by multiplying the total duties on the articles weighed with their respective coverings, by the weight of the tare, dividing the product by the net weight, and the quotient will be the assessment of the tare.

ART. 594. When an assessed article contains others, it shall be dutiable according to the tare of the latter, in addition to that which corresponds to it in the tariff.

ART. 595. One hundred and twenty-five per cent of the duties and charges established by this tariff, is payable in bonds or silver in the proportion designated by the Government, and 25 per cent in Salvador bonds.

ART. 596. When a consignment is ordered to be examined, a surcharge of 25 per cent on the total of the duties and taxes will be made; exceptions will be made in the case of goods damaged on board ship, incomplete disembarkations, packages with marks or numbers repeated, when they contain sheets of galvanized iron, pieces of lumber and machinery, unpacked; petroleum and other inflammable materials; barbed wire; fresh potatoes; wheat flour; cement; lump coal; stearin, unmanufactured; water pipes; iron in bars, rods, or plates; loose washers and tires for carts; bundles of iron buckets; shooks; large kettles and molds for sugar; and, in general all other unpacked articles, or packages which are not liable to cause confusion, either by reason of their not being taken into the warehouse, or their contents being visible; collectors are duly authorized to administer the con-

traband law in all its severity when they are convinced that marks and numbers have been duplicated with fraudulent intention on the part of the importer.

TAXES UPON EXPORTATION.

ART. 597. A general export tax of 20 cents per 100 pounds gross, is imposed upon the following articles: Indigo; balsam; coffee; hides; rubber; deer and other skins.

ART. 598. Coffee will pay a surtax of 20 cents per 100 pounds gross; and 120 pounds of unshelled coffee will be assessed as 100 pounds of clean coffee.

ART. 599. Indigo, balsam, rubber, hides, deer and other skins, will pay in addition to the general tax, 28 cents per 100 pounds in favor of the Central Railroad bonds, and 18 cents per 100 pounds surtax.

ART. 600. All other articles and products which may be exported, are exempt from all duties and taxes.

SPECIAL CONCESSIONS IN FAVOR OF CORPORATIONS AND COMPANIES.

The Banco Salvadoreño has the right to import, free of all duties and taxes, iron safes, and all other articles necessary to carry on the business of the bank; metals, in bars, or coined, may be exported and imported free of all duties and taxes. The Occidental Bank and the London Bank of Central America have the same privileges; the Banco Agricola Comercial has also these privileges, with this modification: that if posterior laws should prohibit or declare inadvisable the importation or exportation of metals, the bank shall also be subject to such law.

On April 12, 1895, the Government celebrated a contract with Carlos Melendez, granting him the privilege for ten years, to import, free of all duties, taxes or assignation, all kinds of machinery, tools, implements, etc., necessary for the establishment and working of a machine shop and foundry, and for the manufacture of all articles of wood and iron; insulated paper for refrigerators; all kinds of electrical machinery and fittings, for whatever purpose; all kinds of lumber, rough or planed. A similar privilege was granted for twenty years to import all kinds of metals and minerals in any form; all kinds of water or steam pipes; rivets and screws of any size or material; wire cables of all kinds; wire netting and perforated metal sheets; sand for casting; limestone; borax; graphite; manganese; coal, wood, and coke; fireproof brick and clay; tar; ashphaltum; sandpaper; emery cloth, powder, and wheels; machine oils; sulphuric and chlorhydric acid; rubber and amianthus packing for machinery; pine wood for patterns; all kinds of scientific books relating to mechanics and industry; instruments and paper for lineal drawing; pencils, pens and ink. Free exportation for twenty years was also conceded for all kinds of machinery, tools, and furniture, or any manufactured articles of wood or metal, manufactured or produced in Melendez' establishment. An invoice of articles to be imported, detailed as minutely as possible, shall be presented to the respective minister for his approval; and it must be understood that the articles or materials are intended solely for the erection of the works or for the production of manufactured articles therein.

The Sonsonate and Izalco Tramway Company and the San Salvador and Santa Tecla Tramway Company have privileges to introduce free of all duties and taxes, all the cars, rails, and other machinery and articles necessary for the construction and maintenance of their respective lines.

The new Pier Company of Acajutla has the privilege to import free of all duties and taxes, all the materials, tools, combustibles, etc., necessary for the construction and subsequent maintenance of the pier.

The San Salvador and Santa Tecla Railway Company has the privilege of importing all engines, cars, machinery, tools, rails, spikes, and all other accessories

necessary for the construction and subsequent preservation of the railway, free of all duties or taxes of whatever nature, already established, or that may be established in the future.

LAW RELATING TO CONSULAR INVOICES.*

ART. 511. Any person who may ship articles of commerce from a foreign country to this Republic, even although such articles may be exempt from duties and taxes, must draw up an invoice in quadruplicate of all that which constitutes his shipment to each consignee. These invoices must be written in Spanish, and include:

(*a*) The name and residence of the shipper, the port of shipment, the name of the vessel, and of the captain thereof; the name of the consignee, except in cases where goods are shipped to the order of the shipper; and the name of the person on whose order and account they are shipped.

(*b*) The marks of the packages.

(*c*) The serial number of each package shown separately; but should various packages be of the same weight, and also contain the same goods, one entry may suffice.

(*d*) The kind of package, (sack, case, bale or barrel, etc.).

(*e*) The gross weight of each package in kilograms, expressed in letters and figures, except in the case of machinery, lumber and iron, the weight of these articles may be shown in a circle; but if, as in the case of the exception noted in (*c*), the weight and contents of the packages are alike, and they are invoiced on one line, then the weight of one package may be shown in letters and figures, and the total weight shown in figures in a separate column.

(*f*) The name of the merchandise contained in each package, according to the nomenclature of the tariff; and the material of which the merchandise is made.

(*g*) A detailed specification of the contents of each package. The following must be shown in figures:

(1) The number of pieces, pairs, thousands, liters, or kilograms, according to the manner of quoting the respective goods.

(2) In woven goods, the length of each piece, or the total length of the pieces, and the width of the material, expressed either metrically or in yards and inches.

(3) The net weight in grams or kilograms, of each article.

(4) The value of each article in the currency of the country of origin.

(*h*) The place of origin of the goods.

(*i*) The total value of each package in currency of the country whence it is shipped, and the total value of the lot, if there are several packages of the same goods.

(*j*) In shipments of wines and liquors, the alcoholic strength of the same must be expressed in centesimal degrees.

ART. 512. Consular invoices must always show the actual marks and numbers which the packages bear.

ART. 513. Consuls will not accept invoices that have erasures, interlineations, alterations or blots, except they be noted at the foot, over the signature of the shipper, and in such cases the latter will pay to the consul a fine of 1 peso for each defective instance.

Incomplete invoices will not be accepted, nor will those which do not comply with all the requisites of the present law.

ART. 514. Two or more packages with the same mark and also the same number, must not appear upon the one invoice. A number will be considered as having

* NOTE.—This law postdates that of April 3, 1900, which was published in CONSULAR REPORTS No. 240 (September, 1900).

been repeated when the same figures appear upon two packages, although in one instance the figures may be qualified by the word "bis" or (a), or any other similar distinguishing sign.

Unpacked iron, building lumber, and machinery are exceptions to the foregoing.

ART. 515. Goods must not be consigned to more than one person on the same invoice, although bearing the same mark.

ART. 516. With the understanding that the consular invoice has a legal value in any actions or investigations that may subsequently take place, the shipper will make a written declaration in the following form, at the foot of each invoice: (Name) swears and declares upon his word of honor, that the above invoice, consisting of ——— pages, includes ——— packages, with a total weight of ——— kilograms, and total value of (currency of country of origin); that the marks and number of each package, the weight and contents of the same, and the prices at which they are quoted, are correct, and are identical with the entries in his books; and that the amount for which the goods are insured is ———.

ART. 517. Consuls will only certify invoices for merchants or manufacturers who, either in person, or through the medium of their legal representatives, sign the sworn declaration relative to merchandise bought or furnished by such merchants or manufacturers. Consuls must absolutely abstain, under penalty of removal from office, from certifying any invoice for persons who are simply shipping or other agents; the fundamental object of the present law being to avoid deception as far as possible, it is imperative that the aforesaid declaration be truthful, and that it be signed only by the legitimate dealers actually engaged in business with correspondents in Salvador, and who are purchasers or suppliers of the goods to be shipped.

ART. 518. False declarations in regard to the weight or contents of the packages, the names of the goods and materials of which they are made, prices of the same, or any other detail prescribed by the present law, as also the violation of articles 514 and 515, will be punished according to law; false declaration in regard to the value of the goods will be punishable by the imposition of double duties and taxes, and in regard to marks or numbers by a surcharge of 25 per cent upon the total duties and taxes.

If contrary to the terms of article 513, the consul should accept an invoice that is lacking in any important detail, such as the declaration of value, the gross and net weight, the amount of insurance, or any of the details expressed in article 511, a surcharge of 25 per cent will be imposed upon the duties and taxes corresponding to the goods.

ART. 519. The consul will place the seal of the consulate upon each page of the invoice presented to him, and at the foot of the last page he will certify in the following form: "I hereby certify that the foregoing invoice was presented to me by ——— ———; that the signature at the foot of the sworn declaration therein is genuine, and that the shippers are engaged in business at this place." When, by reason of there being no consular agent of Salvador at the port of shipment, the consular agent of another nation certifies to the invoice, it may be drawn up in conformity with the laws of the country which the consular agent represents; when the certification is made by two merchants, then it may be made in the form prescribed by the laws of the country from which the goods are shipped; but under all circumstances the invoice must state the number, gross weight, contents and value of the packages. In either case, the shipper must forward the copies as prescribed in article 521.

ART. 520. The consul will note on each invoice the amount of the fee received, according to the following tariff, calculating the peso on a par with the money of the country in which he is located—that is to say, in England 4s., in France 5

francs, in Germany 4 marks, in Italy 5 lire, and in Spain 5 pesetas; and taking the principal of the invoice as a base of calculations, to the exclusion of other costs.

For each invoice not exceeding $25, $1.

For each invoice of more than $25 but not more than $100, $2.

For each invoice of more than $100 but not more than $500, $4.

For each invoice of more than $500 but not more than $1,000, $6.

For each invoice of more than $1,000, 25 cents for each $100 or fraction thereof up to $5,000. Exceeding $5,000, 10 cents for each $100 or fraction.

ART. 521. One of the four copies will be retained by the shipper; the consul will send, by the same steamer if possible, one to the chief auditor's office, one to the collector at the port of destination, and will retain one in the archives of the consulate.

ART. 522. Goods will not be registered in the national custom-houses unless the consignee present the certified invoice, except in the case of loss or miscarriage of the consignee's copy and also of those sent to the auditor and collector. In this case, the goods may be registered by examination; but the consignee must produce the original invoice, and pay double the established charges for certification of consular invoices.

If the nonpresentation should be occasioned by the miscarriage or delay of the consignee's copy, the registration may be effected by virtue of the copy received at the custom-house, and should the latter not have been received, by a certificate of the copy forwarded to the auditor.

ART. 523. It is indispensable that the manifests or bills of lading of all freight destined for ports in Salvador, crossing the Isthmus of Panama, be visaed by the consular officer of Salvador at that point, he being the only person authorized to do so.

ART. 524. All vessels bringing freight for Salvador which does not cross the Isthmus of Panama must have the manifest or bill of lading visaed by the consul of Salvador at the port of shipment.

ART. 525. In case of an infringement of the foregoing regulations, the Government will impose a fine of 200 pesos on the captain of the vessel; without impeding the disembarkation of the goods.

ART. 526. Consular invoices must be obtained in the country from which the goods are shipped.

ART. 527. The collectors of customs who allow goods to be registered without the formalities herein prescribed, will be fined in each instance 100 pesos.

AMPLIFICATION OF THE FOREGOING LAW.*

ARTICLE 1. The packages shown on each invoice may bear any mark or marks that may be desirable, but each package must bear its separate serial number; the repetition of a number on two or more packages shown on the same invoice is prohibited.

ART. 2. The foregoing article does not prohibit the serial number being marked more than once on the same package, or on the casing, packing, or wrapping thereof, nor does it apply to unpacked iron, building lumber, machinery, and other objects that may be shipped without packing. It is, however, strictly prohibited to consign goods to two or more parties on the same invoice.

ART. 3. Consular officers will certify to invoices when they are signed by merchants, manufacturers, or their legal representatives, when they know such signatures to be genuine. In the case of a person signing an invoice for the first time,

*See ADVANCE SHEETS OF CONSULAR REPORTS No. 844 (September 27, 1900); CONSULAR REPORTS No. 242 (November, 1900).

he must do so in the presence of the consular officer who certifies to the invoice, in order that the latter may take note of the signature for the purpose of being able to recognize it on a future occasion.

ART. 4. Consular officers must not certify invoices that have not been filled or dispatched from the consular district under their jurisdiction, under penalty of nullification of such certificate.

ART. 5. When the persons specified in article 3 of this decree do not care to advise the local consul of their shipments, they may make the sworn statement as set forth in article 517 of the preceding law, before the consul-general, in the form prescribed by article 3 of this decree, when the consul-general will certify to the invoice.

EXPLANATORY.

(1) Cotton, linen, or woolen articles, antimacassars, garters, table covers, scarfs, corsets, sashes, curtains, floor carpets, suspenders, and other unclassified articles of a similar nature having minor adornments of finer materials will be dutiable as if they were plain.

(2) Machinery for elaborating or improving the agricultural products of the country will be considered as agricultural machinery, and will be admitted free of all duties and taxes.

DAMAGED GOODS.

In the case of partly damaged shipments of wines, liquors, etc., bottled, in cases, the cases will each be filled up to the original number of bottles, thus reducing the number of cases. If the last case should contain six or more bottles, the whole tare will be charged, but if there should be less than six bottles, the duties will be waived.

Demijohns and barrels in a leaking or partly empty condition from whatever cause will pay the full duties and taxes, but the consignee has the right to abandon demijohns or barrels that are nearly empty.

No reduction of duties or taxes will be made in the case of goods that have depreciated in value by reason of damage sustained on board ship; but the interested party may abandon the damaged portions.

Articles such as tobacco, preserves, grains, fruits, and other eatables or beverages that may have become decomposed in transit, may be either totally or partially abandoned, according to circumstances, but no reduction will be made upon the part that is accepted by the owner.

Provisions, beverages or other articles that have become decomposed and have been abandoned by the owner, shall be thrown away, and a memorandum to that effect made and approved by the collector, auditor, storekeeper, and the owner or his representative.

Damaged and abandoned goods that retain value, will be remitted to the general treasury warehouse.

FREE ARTICLES.

Agricultural machinery and plows.
Animals, live (with the exception of cattle, etc., from the neighboring republics); domestic fowls, dissected animals.
Apparatus and pumps for extinguishing fires.
Assaying furnaces.
Baggage, up to 100 kilograms.
Barbed wire, with its hooks and stretchers.
Cans, iron for balsam.
Carbide of calcium.
Cement.

Chalk for use of schools.
Coal, in lumps, coke, animal and vegetable carbon in lumps.
Cotton, raw, or in yarns.
Effects of foreign ministers residing in the Republic, when there is reciprocity on the part of the nation they represent, and the legal requisites are complied with.
Fertilizers of all kinds, guano.
Filters and distilling apparatus.
Fragments of wrecks.
Gasoline.
Gold in dust, bars, or coined.
Hair, of rabbits or hares, for making hats.
Ink, for printing and lithographing.
Live plants.
Looms of all kinds.
Mining apparatus. (See mining apparatus in tariff schedules, under "Miscellaneous articles."
Paper, printing, for periodicals. (By decree of October 19.)
Platinum, in blocks or powder.
Scientific instruments, not specified.
Seeds, garden, flower, or agricultural.
Silver, in bars, dust, or coin.
Sulphide of carbon.
Surgical instruments, with or without case.
Vaccine fluids and serums.

APPENDIX.

Several consular officers having called the attention of the Foreign Office to doubts existing regarding the application of the law relating to consular invoices, the following amendment to the same was published in the Diario Oficial of October 23, 1900:

"(1) The captain of every vessel carrying freight for Salvador, that does not cross the Isthmus of Panama, must bring four copies of the manifest or bill of lading, duly visaed by the Salvador consul at the port of shipment; on his arrival he must deliver these copies to the collector of customs or his representative.

"(2) The four copies of the bill of lading or manifest of freight destined for Salvador ports, which crosses the Isthmus of Panama, shall be visaed by the consul of Salvador in Panama, and the captain must deliver the same to the collector or his representative, as in the preceding clause.

"(3) The manifests or bills of lading referred to must show in the heading, the name and nationality of the vessel, the name of the captain, the number of tons register, the number of the crew, and the port from which the vessel sailed.

"In the body of the manifest, in separate columns, must be shown the marks and countermarks, the numbers, (when there are any), the number, kind, and contents of the packages, the gross weight of each lot, the destination, the names of shipper and consignee; and at the foot the sworn declaration that the statements in the manifest are true, the date, and the signature."

In the Diario Oficial of November 3, 1900, was published the following addition to the above:

"(4) Consuls will charge $5 gold for visaing manifests or bills of lading of freight destined for Salvador, which does not cross the Isthmus of Panama.

"(5) Should the freight be transshipped in any of the ports on the Pacific coast, it will not be necessary to have the manifests visaed at the port of shipment, as the Salvador consul at the port of transshipment may visa the four copies, for which service he will charge 10 silver pesos.

"(6) Consuls in any Latin American port, when goods are shipped from thence to Salvador, and when they do not cross the Isthmus of Panama, will also charge 10 silver pesos for visaing the manifest or bill of lading of such goods."

The following resolutions appear in the Diario Oficial of October 27, 1900:

"The Executive Power, in consideration of the fact that certain difficulties have arisen regarding the immediate application of the new tariff and consular invoice law, owing to the consuls of Salvador in foreign countries not yet being aware of the same, and also since goods that have been ordered previous to the promulgation of the tariff may suffer by the changes in the same, resolved:

"(1) To authorize the collectors of customs to admit as valid consular invoices that lack the specifications required by clause "*g*", numbers 1 to 5, article 511 of the corresponding law, from this date until the 31st of December proximo.

"(2) White and red table wines and others which may exceed 13° centigrade of alcoholic strength, will be exempt during the same period from the payment of the increase provided for in the tariff.

"(3) Coarse cotton cloths, as drill and manta drill will be passed as such during the same period, although they may have a colored stripe or stripes along one or both edges.

"(4) Laces, insertions, frills, and galloons of cotton of less than 2½ centimeters in width, when contained in the same package or otherwise mixed with those of 2½ centimeters or more in width, will be dutiable at $18.40 per 100 pounds and the latter at $55.20 per 100 pounds, weighing both separately.

"(5) On the expiration of the period hereby conceded, customs collectors will rigorously enforce all the provisions of the two laws herein alluded to."

"The Executive Power being desirous of regulating the collection of duties and taxes by the postal authorities upon postal parcels and packages containing dutiable articles, resolves:

"(1) Small packets containing periodicals, printed books with ordinary covers, papers of a business nature, or patterns and samples without value, shall be admitted free; but should they contain dutiable goods, they will be considered as postal parcels and will pay the established duties and taxes.

"(2) Postal parcels will pay duties and taxes according to articles 572, 576, 578, 588, 590, 591, 593, 594, 595, and 596 of the fiscal code; and the duties, with the exception of the 25 per cent in bonds of Salvador, which is waived, must be paid in cash.

"(3) In place of the costs established by articles 580, 582 and 583, the following will be charged:

	U. S. gold.
"Territorial transit, per parcel	$0. 10
"Porterage	.04
"Set of policies when duties and taxes do not exceed $10	.10
"Set of policies when duties and taxes run from $10 to $20	.20
"Set of policies when duties and taxes exceed $20	.40

* * * * * * *

"(5) When the net value of the invoice does not exceed $50 gold, it is not necessary to present a consular invoice, but the original must be produced, and failing this, a surcharge of 25 per cent upon the total duties and taxes will be made.

"(6) If the value of the goods should exceed $50, and the owner fail to present a consular invoice, the authorities will proceed as directed by article 522 of the fiscal code.

"(7) The present resolution will take effect in respect to consular invoices three months from the date of publication, and in regard to the other dispositions, from this date."

UNITED STATES EXCHANGE IN GUADELOUPE.

I have the pleasure of reporting the establishment here of an American exchange for the purpose of introducing various lines of our manufactures not known in this market and of substituting American for other foreign goods in lines already established.

For two years, I have been endeavoring to get someone to take up such a project seriously, but financial conditions have heretofore stood in the way. There has been a great improvement in these conditions lately; a reflex wave of the prosperity in the United States is beginning to be felt. Two or three hundred American bicycles have been sold here, and there is a small but steady demand for them. Some samples of American shoes were sent, but, unfortunately, the consignee died, and no one else took up the business; but the samples were eagerly purchased and a desire for more expressed. Several orders for steam engines and fittings were placed in the United States, and others are soon to follow.

I have been in consultation with the managers of the enterprise, and am satisfied as to the financial responsibility of the exchange. It is to be situated in the building occupied by the chamber of commerce, and all samples and catalogues are to be well displayed and inducements offered to all interested to visit it. The manager speaks and writes English, and is thoroughly acquainted with trade relations between this country and the United States, France, and England. He will send out circulars of inquiry, and will solicit from manufacturers and others desirous of doing business here catalogues and samples of what they have to sell. I can not pretend to give an exhaustive list of goods, but they will include steam engines and fittings of all kinds, steam and small pumps, sugar machinery of all kinds, coffee machinery; apparatus for distilleries, for tanneries; small hardware, tools, small power mills for animal power, light architectural iron, corrugated iron, metal roofing tiles, roofing materials of all kinds, light portable railroads; wagons, both for roads and railroads; nails and screws, china tableware, glassware, cotton prints and head handkerchiefs of bright colors and patterns, table napery, sheetings, textiles in general, bent-wood furniture, paints and varnishes, paint brushes, lamps, calcium carbide, acetylene lamps for bicycle and house use, photographic materials of all kinds; boots and shoes for men, women, and children; clocks, novelties, rubber stamps and outfits for manufacturing, candies, etc.

There is no probability of any business being done in agricultural machinery or windmills, and there are some other lines for which

there is no demand; but all these are matters upon which the American Exchange purposes to give information.

I would impress upon those who may desire to enter into correspondence with the exchange the uselessness of sending merely catalogues without prices. The very fullest and most detailed information should be given, with prices and discounts. The sending of samples I consider almost necessary to the success of the plan. One sample talks more loudly than a dozen catalogues in a foreign language. With samples, catalogues, prices, and discounts, the managers of the American Exchange can explain, and can induce merchants to try, the goods. During the last three years I have received tons of catalogues, representing a very large expenditure in printing, postage, etc., and, for the most part, it was so much money thrown away. The same amount invested in samples sent to an energetic and responsible agent would be far more likely to produce results. The exchange will pay all freight expenses, duties here, etc., and will depend upon the discounts and other legitimate profits of regular business for its gains. It also will receive, on consignment, sample orders of articles in well-established lines, such as flour, beef, pork, pease, beans, biscuit, etc., from parties desiring to enter into competition for the business.

Another thing: When orders are received the goods sent must be up to sample, and great care must be taken in the packing. I received two large packages from France soon after my arrival here, the one containing two china dinner and breakfast sets, altogether numbering several hundred pieces, and the other containing two hundred pieces of fragile, fine table glassware. Not one piece of the china was broken or even chipped, and as to the single piece of glassware that was broken, I am not sure that the breakage did not occur in the unpacking. I believe that our china and glass can successfully compete with French or English ware. As to textiles, only correspondence with the exchange can determine precisely what goods would have the best chance of being sold here. I presume the exchange will furnish samples of what is wanted. The boots and shoes should be light in material and of such quality that the highest priced could be retailed here for not more than $3.50 with a fair profit to the retailer. In general, it may be said that articles of really good quality and low price are those most likely to succeed.

There are a number of improvements proposed here—electric lighting of towns and cities, establishment of steam or electric railroads, bridges, etc.—and it is certain that some day they will be carried out. The American Exchange will try not merely to secure these important contracts, but to hasten their realization by demon-

strating the rapidity and cheapness with which they can be accomplished by Americans. At the same time, it will endeavor to foster what might be called a "small-order" business with the United States and will try to put into practice some such scheme of forwarding parcels as is indicated in my report of November 19.*

If our people will do their share, I see no reason why a valuable market for our products should not be opened, for the trade will naturally in time extend to Martinique and other islands.

Samples, catalogues, etc., should be sent, not to this consulate, but directly to the American Exchange, Pointe a Pitre, Guadeloupe, West Indies.

LOUIS H. AYMÉ,

GUADELOUPE, *November 24, 1900.* *Consul.*

In a later report of the same date, Mr. Aymé says:

I have been notified by the American Exchange that it has received an order for an automobile. A French machine is ordered, with option to purchase an American one, if quality and price are suitable. What is wanted is an automobile for two persons, gasoline or naphtha (not electric), light weight, a good climber; must have buggy top, as this is a hot, sunny country. If this order can be placed in the United States, all future orders will also go there. Catalogues fully illustrated, prices, weights, dimensions, discounts, etc., should be sent as quickly as possible to the American Exchange, Pointe a Pitre, Guadeloupe.

DEMAND FOR MACHINERY IN GUADELOUPE.

I have been requested to notify manufacturers and others interested that detailed information is required here as to the following:

Machinery, boilers, engines, evaporators, centrifugals, etc., for the complete installation of a sugar mill to grind cane and make about 500 tons of centrifugal sugar per season.

Small crushing mills for grinding cane, to be worked by animal power.

Machinery and installation of small sugar mills, to be used with above.

Machinery for complete installation of a tannery to make sole and similar leathers; capacity, about 5,000 hides.

Tan mills (*a*) for green bark, (*b*) for dry bark.

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*See "Demand for machinery in Guadeloupe," following.

Machinery for complete installation of rum distillery; capacity, from 50 to 100 gallons per diem.

Machinery for complete installation of rum distillery; capacity, from 500 to 1,000 gallons per diem.

In each of these cases, it will be worse than useless to merely send catalogues, especially without prices. Full details are wanted—weight, size, and cost of each separate part; discounts, etc. Several months ago, I called for catalogues of steam engines and fittings, and scores of catalogues were sent in reply; but only a very small percentage gave prices. The result was that while a number of orders were placed, the goods were in several instances ordered from people who had quoted prices, although articles shown in catalogues without prices would have been preferred. The merchants here understand perfectly that prices are liable to variation as the price of iron and metals varies, but they very properly want some price quoted so that they can make calculations. It may not be the most businesslike way in the world, but the way of these people is to want to have all the information in their hands for a long time; then, when they are ready to order, they wish to have no delay whatever. They simply will not write saying exactly what they want and wait for a price. They will study out that the article wanted will cost about so much and then order it. French manufacturers understand this, and if our people want this business they must conform to the ways of their prospective clients. In any case, a catalogue without prices is much like a gun without a lock—pretty to look at, maybe, but it does not bring down any game.

Further, manufacturers should be prepared to carry on their correspondence in the French language and to use the metric system throughout. There is a good trade to be worked up here, slowly but surely, in machinery of many kinds. Our machines have proved better and cheaper than the French machines, and the difference in tariff in favor of France is more than offset by the lower freight rates from the United States. I have sent to one large electric company a request for an estimate for lighting this city with arc and incandescent lamps. I could get hold of only one plan of the city, and time was pressing (several French firms and one Canadian company are figuring for the contract) or I should have called for estimates from all interested. As it was, I simply did the best I could to see that some American company should get the contract.

A very much larger trade with the United States could be secured if there were only some way in which small orders could be filled and sent without the necessity of the intervention of an agent in the United States. For example, on a portable engine purchased lately in the United States there was a manometer that was just what was

wanted by another person here. He wanted half a dozen, but he had no agent in the United States and could not write direct to the manufacturers to send him the small parcel by mail or express, for we have neither; so the order went to France, and the goods were sent by parcels post. I would suggest that the steamship companies running to these islands might find it to their advantage to get up a system of baskets or boxes, one or more for each island, in which small parcels could be placed. The whole box should be consigned to the agent of the line and a single invoice made, detailing the various parcels in the box. The agent could clear the box through the custom-house and distribute the separate parcels. A moderate charge would be cheerfully paid. I know that if some such system existed, I would frequently send small orders to the United States that I now have to send to France, England, or Barbados. What is true in my case is true for many others.

Referring again to the catalogues, etc., requested, time will be saved if, instead of sending them to this consulate, they are directed to Mr. T. Papin Beaufond, Bâteaux à Vapeur, Pointe a Pitre, Guadeloupe.

LOUIS H. AYMÉ,

GUADELOUPE, *November 19, 1900.* *Consul.*

NICARAGUAN STEAMSHIP CONTRACT.

Consul Sorsby transmits from San Juan del Norte, November 19, 1900, translation of a contract between the Nicaraguan Government and Mr. Joseph Frye, representing the United Fruit Company, of Boston, Mass., as follows:

[Translation.]

CONTRACT BETWEEN THE GOVERNMENT OF NICARAGUA AND MR. JOSEPH FRYE FOR THE ESTABLISHMENT OF A LINE OF STEAMERS, ETC.

Leopoldo Ramirez, Secretary of State in the Office of Fomento, as representative of the Government of the Republic of Nicaragua for one part, and Mr. Joseph Frye, for himself, have entered into the following contract:

I.—Mr. Joseph Frye obligates himself to establish within six months from the time of signing of the present contract by the President of the Republic, on the Atlantic coast of Nicaragua, a line of steamers to ply between Bluefields, San Juan del Norte, Limon, Bocas, and Colon; and between Bluefields, Corn Island, Great River, Prinzapulca, Cape Gracias à Dios, and Ceiba or Puerto Cortez, for the term of twenty-five years, commencing from the date of the ratification of this contract by the Assembly.

II.—The steamers that will effect the service between Bluefields and Colon shall be not less than 80 feet in length by 16 feet beam and 45 tons burden, and those for the service between Bluefields and Puerto Cortez shall be not less than 110 feet in length by 22 feet in beam, and from 85 to 100 tons burden, and the steamers of both lines are to be appropriate for the service on the coast.

III.—Mr. Joseph Frye binds himself to replace the steamers mentioned in the foregoing article by larger ones when the increase of traffic and necessities of commerce on the coast demand it.

IV.—Mr. Joseph Frye contracts for the steamers of the line to make the following trips: Between Bluefields, San Juan del Norte, Limon, Bocas, and Colon, and vice versa, three trips a month at least; between Bluefields, Corn Island, Great River, Prinzapulca, Cape Gracias, Ceiba, and Puerto Cortez, two trips a month at least; between Bluefields and Rama, two trips a week at least; between Bluefields and New Orleans, at least six trips a month.

V.—The rates of passage between the ports mentioned in the present contract shall not exceed those fixed in the following tariff:

Tariff.

	Bluefields.	San Juan.	Limon.	Bocas.
San Juan	$7.50			
Limon	12.50	$7.50		
Bocas	15.00	12.50	$6.00	
Colon	25.00	20.00	12.50	$10.00

	Bluefields.	Corn Island.	Rio Grande.	Prinza-pulca.	Cape Gracias.
Corn Island	$5.00				
Rio Grande	10.00	$7.50			
Prinzapulca	12.50	10.00	$5.00		
Cape Gracias	20.00	15.00	12.50	$7.50	
Puerto Cortez	30.00	25.00	20.00	17.50	$10.00

VI.—These prices represent American gold and are for first-class passages, including food and bed. The second-class passages shall be half rate and do not include the use of the saloon, food, or bed. Each passenger will be allowed to carry free baggage not exceeding 100 pounds or 4 cubic feet measurement. All excess baggage shall pay according to the tariff of freights. It is also understood that each passenger from San Juan del Norte or for San Juan del Norte shall pay $1.50 gold for transportation from the bar to the port, or vice versa.

VII.—The rates of freight between the said ports shall not exceed those fixed in the following tariff (for every 100 pounds):

	Bluefields.	San Juan.	Limon.	Bocas.
San Juan	$0.25			
Limon	.50	$0.25		
Bocas	.60	.50	$0.25	
Colon	.75	.65	.50	$0.40

	Bluefields.	Corn Island.	Rio Grande.	Prinza-pulca.	Cape Gracias.
Corn Island	$0.15				
Rio Grande	.25	$0.25			
Prinzapulca	.40	.40	$0.20		
Cape Gracias	.60	.60	.40	$0.25	
Puerto Cortez	.75	.75	.60	.50	$0.25

These prices are in American gold; by measurement, one-half will be charged for each cubic foot. It is also understood that cargo for San Juan and from San Juan shall pay 5 cents extra for transportation from the bar.

VIII.—Mr. Frye concedes to the Government of Nicaragua a rebate of 50 per cent on the tariff for passages and freight fixed in Articles V and VII, and binds himself furthermore to carry all classes of freight of the Government of Nicaragua between New Orleans and Bluefields and vice versa at the prices of Tariff No. 3 of the United Fruit Company, which forms a part of this contract, with a discount of 50 per cent, during the period of this contract.

IX.—Mr. Frye also binds himself to maintain during the term of this contract, in San Juan del Norte, a steam tug suitable for the service between the said port and bar, and not to charge more than $16 gold for each trip. If this be for account of the Government, the charge will only be $10 gold for each trip.

X.—Mr. Frye binds himself, during the period of this contract, to carry the mails of the Government of Nicaragua from Bluefields to New Orleans eight times a month at least; between Bluefields and San Juan del Norte, Limon, Bocas, and Colon, three times a month at least; between Bluefields and Corn Island, Great River, Prinzapulca, Cape Gracias, Ceiba, or Puerto Cortez, twice a month at least; and between Bluefields and Rama, twice a week at least, without any remuneration whatever. But it is understood that the mail bags will be received by and delivered to the agent of the company in the respective post-offices.

Mr. Frye concedes to the Government of Nicaragua, annually, the following free passages: Twenty-four first-class passages between Bluefields and New Orleans and return; twenty-four first-class passages between Bluefields and Colon or any intermediate port and return; twenty-four first-class and twenty-four second-class passages between Bluefields and San Juan del Norte and return; twenty-four first-class passages between Bluefields, Ceiba, or Puerto Cortez or any intermediate port and return; one hundred first-class passages between Bluefields and Rama, and return; and three hundred passages between Bluefields and the Bluff and return.

XI.—The Government of Nicaragua agrees to pay Mr. Frye a monthly subvention of $1,000 American gold, which will be paid in the manner indicated at the administracion de rentas of Bluefields. And the steamers consigned to Mr. Frye will be received as customary until 6 o'clock p. m.; but in case of bad weather or some other accident, through no fault of the manager, or if they have arrived at the Bluff before said hour, they shall be received up to 10 o'clock p. m.

In order that the steamers may not suffer any loss of time, the Government obligates itself to give orders to the authorities of the ports to receive and despatch the ships as stipulated. It is understood that the steamers will remain all the time necessary for disembarking and receiving passengers and freight, but in any case they shall remain at anchor not less than three hours.

In case of any disagreements between the authorities of a port and the employees of Mr. Frye in regard to any point or detail not provided for in this contract, the authorities shall accept a bond as sufficient temporary guaranty until the question can be decided in conformity with Article XXI of this contract.

XII.—Mr. Frye has the privilege of importing free of customs duty or of any other fiscal or municipal tax established or to be established, the following articles: Coal, lumber, machinery or parts thereof, machine oil, kerosene, lime, cement, brick, agricultural and mechanical implements, office furniture, books and office stationery, fertilizers for lands, food for animals; materials for use in construction and repair of the machine shops, stores, buildings, and wharves. It is understood that the articles above mentioned shall be exclusively for the use of the company.

XIII.—In order to avail himself of the concessions referred to in the foregoing clause, Mr. Frye shall present at the office of the general inspection of the Atlantic coast a copy, signed by the representative of the company, of all orders for goods from abroad; and, upon the arrival of the goods in the country, a duplicate of the consular invoice shall be presented at said office for comparison with the order. After an examination of the invoice, the authorities will issue the order or permit for the free introduction, having first registered the merchandise intended for free introduction at the custom-house.

XIV.—If it can be legally proven that Mr. Frye, his heirs or successors, or the company to whom these privileges may be transferred, has given or sold any of the articles mentioned in Clause XII to any person or persons not connected with the service, the right of free introduction conceded in the above-mentioned clause shall be forfeited, and the customs laws against fraud shall apply, in the case of sale or donation, and duties shall be paid on all importations as prescribed by tariff and laws in force.

XV.—Mr. Frye obligates himself to deposit $20,000 in the general treasury, or in the administracion de rentas of Bluefields, or to give a bond satisfactory to the Government for the same amount, as a guaranty for any fiscal defraudation committed or for any contraband of war brought in discharging the steamers during the night, in conformity with Clause XI.

XVI.—The Government concedes to the employees and laborers of Mr. Frye exemption from all military service and the steamers from the payment of port dues, whether they be fiscal or local, that now exist or may be established, and also concedes permission to establish between his office in Bluefields and his agent's office at the Bluff, in connection with the shops and other buildings, telephone lines independent of the national wires for the exclusive use of the company of Mr. Frye and such others as he may represent.

XVII.—Mr. Frye agrees to transport to the city of Rama from any port or ports in the United States from which the line of steamers represented by him has service with Nicaragua, all the material and rails destined for the construction of the railroad between said city and Lake Nicaragua, in the event of the construction of said railroad by the Republic for its own account; and the Government concedes to Mr. Frye the rights of navigation in all those rivers and lakes of the Atlantic coast of Nicaragua, with the exception of those the exclusive right of navigating which has been given to a third party.

XVIII.—Six months have been conceded to Mr. Frye for the organization of the line of steamers between Bluefields and Puerto Cortez and between the port of San Juan del Norte and bar of said port, it being stipulated that during these six months the subvention of the Government will be $500 American gold per month.

XIX.—Mr. Frye, or his successors, shall maintain in Bluefields a legal representative, with ample facilities to treat with the Government respecting any difficulty which may arise.

XX.—Mr. Frye, his successor or successors, may transfer this contract to any person or company; but he, his heirs, successors, and associates, shall be subject to the laws of the Republic and can not, for reasons stipulated in the present contract, make diplomatic claims.

XXI.—This contract will be forfeited for the following causes:

(1) For not establishing at the time stipulated or on the conditions agreed upon, the line of steamers mentioned in Article I;

(2) For not making the deposit of $20,000 or giving a bond for this amount, as stipulated in Article XV; and

(3) For introducing by night, under the cover of this contract, contraband of war or any other class of contraband.

XXII.—Any differences that may arise between the parties to this contract will be submitted to the decision of a tribunal of two arbitrators, each party nominating one arbitrator. Before having any knowledge of the question in dispute, the two shall name a third, to decide in the event of disagreement. The decision of the arbitrators shall be final, and everything relative to the arbitration shall be in accordance with the laws of the country.

BANKS IN RIO DE JANEIRO.

A charter has been granted a Belgian company to establish a bank in Rio de Janeiro, with a capital stock of 25,000,000 francs ($4,825,000). The bank will deal exclusively in loans and mortgages. It is authorized to operate for ten years. The main office is in Antwerp.

In this connection, it may be of interest to American trade to have a list of the local banks, which includes successful institutions of Germany, England, and France, but not one in which the capitalists of our own country are interested as stockholders. Those of importance here are as follows:

Banco Agricolo do Brazil.—Capital stock, 4,000 contos* ($800,000); chartered 1897.

Banco Allianca do Porto.—Capital stock, 4,000 contos ($800,000); reserve fund, 520 contos ($104,000); founded 1863.

Banco Brazil e Norte America.—Capital stock, 10,000 contos ($2,000,000).

Banco Commercial do Rio de Janeiro.—Capital stock, 10,000 contos ($2,000,000); reserve fund, 4,000 contos ($800,000).

Banco do Commercio.—Capital stock, 16,000 contos ($3,200,000); founded 1875.

Banco Constructor do Brazil.—Capital, 24,000 contos ($4,800,000); organized to contract for the construction of railroads, factories, and engineering work, and for undertaking immigration for the various States of Brazil.

Banco de Credito Real do Brazil.—Capital stock, 8,000 contos ($1,600,000).

Banco de Credito Rural e Internacional.—Capital stock, 5,426 contos ($1,085,200).

Banco de Depositos e Descontos.—Capital stock, 5,000 contos ($1,000,000); reserve fund, 790 contos ($158,000).

Banco da Lavoura e do Commercio do Brazil.—Capital stock, 20,000 contos ($4,000,000).

Banco da Republica do Brazil.—Capital stock, 100,000 contos

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* 1 conto (1,000 milreis) is qual to about $200.

($20,000,000); special reserve fund, 6,275 contos ($1,255,000). This is last year's report; bank in liquidation at present.

Banco Rio e Matto Grosso.—Capital stock, 20,000 contos ($4,000,000).

Banco Rural Hypothecario do Rio de Janeiro.—Capital authorized, 20,000 contos ($4,000,000); capital realized, 15,000 contos ($3,000,000).

Brasilianische Bank für Deutschland.—Founded in Hamburg December 16, 1887; capital stock, 10,000,000 marks ($2,380,000).

Caixa Economica e Monte de Socorro.—Established under guaranty of the Government in 1860; receives deposits of 1 milreis (now about 20 cents) and its multiples up to 10,000 milreis ($2,000). This is the business of the Caixa Economica, while the Monte de Socorro is the national pawnshop. The latter will loan any amount from 5 milreis ($1) upwards, secured by gold, silver, or jewels. The loans are made at four-fifths the value of the objects offered at 9 per cent interest a year, it being permitted to redeem them before the expiration of that time on the payment of the pro rata interest. If not redeemed within the stated time, the objects of value are sold at a public auction announced ten days before the sale, and in case the sum realized is more than the amount of the loan the balance remains on deposit for five years at the disposition of the borrower or his legal representative.

London and Brazilian Bank, Limited.—Capital stock authorized, £1,000,000 ($4,866,500); capital stock realized, £900,000 ($4,379,850); reserve fund, £600,000 ($2,919,900).

London and River Plate Bank, Limited.—Capital stock, £1,500,000 ($7,299,750); realized capital, £900,000 ($4,379,850); reserve fund, £1,000,000 ($4,866,500). This is regarded as the strongest and best bank in Rio de Janeiro.

Banco Francez do Brazil.—Capital stock, 10,000 francs ($1,930,000); authorized by decree of 1897.

British Bank of South America.—Capital stock, £1,000,000 ($4,866,500); capital stock realized, £500,000 ($2,433,250); reserve fund, £300,000 ($1,459,950).

As a result of the failure of the Banco Republica, most of the Brazilian banks operating in Rio de Janeiro have been seriously affected and have availed themselves of the sixty days' notice on checks granted by law under stress of circumstances. The affairs of the Banco Republica have been placed entirely in the hands of the Government, with the consent of a majority of the stockholders, and the crisis has been more or less successfully tided over.

W. L. LOWRIE,
Vice-Consul-General.

RIO DE JANEIRO, *October 17, 1900.*

SANITARY TREATY BETWEEN ARGENTINA AND URUGUAY.

The Department has received from the Argentine legation, under date of November 28, 1900, copy of the sanitary treaty with Uruguay, which is translated as follows:

National department of hygiene—agreement between the president of the national board of health of the Oriental Republic of Uruguay, Dr. Ernesto Fernandez Espiro, and the president of the national department of hygiene of the Argentine Republic, Dr. Cárlos G. Malbran, as to the treatment which vessels coming from ports infected with or suspected of the bubonic plague shall receive in both countries.

The president of the national board of health of the Oriental Republic of Uruguay, Dr. Ernesto Fernandez Espiro, and the president of the national department of hygiene of the Argentine Republic, Dr. Cárlos G. Malbran, having met in Buenos Ayres on September 19, 1900, with the intention of making the guaranties of sanitation more efficacious, granting to navigation and to commerce in general all those facilities compatible with them, have agreed upon the following terms for the treatment to be applied to vessels coming from ports infected with or suspected of the bubonic plague:

(1) To ask from the respective Governments the abolition of the present regulations in accordance with the agreement made November 15, 1899.

(2) The sanitary quarantine will commence to be enforced immediately after the departure from the port infected or suspected of the plague, provided that the vessels carry a health inspector who shall perform the medical inspection of the passengers and ship's crew and the disinfection of all the supplies taken on, operations which shall be repeated jointly with the disinfection of the vessel in the port of arrival. Said quarantine shall last five and four days respectively for vessels coming from infected or suspected ports.

(3) Vessels not carrying a health inspector will be submitted to the quarantine of five or four days according to their place of sailing, counting from the date of the medical inspection and disinfection which is practiced on their arrival.

(4) Vessels infected from having had or having sick among the passengers or ship's crew or epizoöty among the rats on board must undergo ten days' quarantine, counted after the disinfection practiced on arrival.

(5) The effects of passengers and ship's crew will be submitted to disinfection, as well as postal parcels, every article of personal or domestic use, and rags in whatever condition.

(6) Articles or objects belonging to the effects of the passengers which, in the opinion of the authorities, may be considered as capable of transmitting the germs and are not susceptible of disinfection will not be admitted.

(7) Correspondence and freights will be admitted without any restriction.

(8) When a vessel arrives in port, although with the declaration of not having had any sickness during the voyage, still, if from certain circumstances there is occasion to consider it suspect, it will be submitted to the sanitary treatment that both corporations agree upon as necessary to be practiced in every case.

(9) The terms of this agreement can be modified, provided that the sanitary condition is substantially altered in the countries from which the vessels come.

(10) The measures indicated shall be applied after the promulgation of the ordinances dictated by the two corporations.

(11) These preliminaries will be submitted to the approbation of the respective Governments.

Additional article.—The Uruguayan and Argentine health authorities, in the event of the apparition of a foreign disease (plague, yellow fever, or cholera) in either one of the two countries, will practice the disinfection, in the ports infected or suspected, of the vessels destined for the country unaffected, as well as of the effects of their passengers and ship's crew. This operation, controlled by the sanitary commissioners of the countries who take the precautionary measures, will constitute the basis of the sanitary treatment which is applied, without detriment to the supplementary measures of quarantine which are stipulated for each one of the said diseases. The terms pertaining to the present agreement must be used in case of the plague.

STOCK RAISING IN PARAGUAY.

The Chaco lands of Paraguay are bounded on the east by the Paraguay River (navigable all the way to Brazil), on the west and south by the Pilcomayo River, and on the north by Brazil and Bolivia. Rich prairies and valuable forests abound. The climate is healthy, and, though it is warm in summer, the temperature is never as high as it has been in New York during the past year.

The prairies have a variety of good grasses and are acknowledged to be the best "fattening" lands in Paraguay. The stock raisers, recognizing this fact, are now taking up and stocking land in the Chaco in preference to extending their holdings on the east side of the Paraguay River. Good land (generally one-third forest and two-thirds prairie) in this section may be purchased for $1,000 gold per league. A league will support 1,000 cattle, and two herds of 1,000 each can be fattened in a year.

Steers can be put on the fields, all expenses paid, at $8.50 per head, and these, when fattened, will bring $12.50 each. On an investment of $1,000 (these values are expressed in gold) for land, $8,500 for cattle, and $1,000 for labor and other expenses—in all, $10,500—an experienced stockman should clear $8,000 the first year. That this ratio is not excessive, many cattlemen will testify. The amount allowed for expenses ($1,000) may seem small, but it should be borne in mind that living and labor here do not cost more than one-eighth as much as in the United States.

There is very little opportunity for a poor man in this section, $3 in gold per month being full pay for labor; but for a stockman with, say, $2,500, there is an excellent opening for profitable investment.

The valuable forests of this region are accessible only along the Paraguay River. A large English sawmill has been built here and is working to its fullest capacity, shipping its product to England.

Another factory, farther up the river, appears to be doing a prosperous business, and last year shipped tannin to the value of $195,000 gold. The rich forests of the interior, however, can only be reached by the construction of a railway. As labor is cheap and the country not at all mountainous, this could be built at a comparatively small cost.

WM. HARRISON,
Vice-Consul.

ASUNCION, *October 1, 1900.*

The following additional details relative to stock raising in Paraguay are furnished by Consul Ruffin, of Asuncion:

The current expenses per year on a cattle farm average 50 cents gold per head, counting for not less than 3,000 head; if there are more than that number the cost would be correspondingly less.

Fat animals are sold at the slaughterhouse in Asuncion and in the towns of the Republic. Animals in good condition, but not fat, are sent to the Yerbales. Good profits are to be made in fattening cattle close to the market.

The best stocking cattle can be bought in the Brazilian province of Matto Grosso. Foreign cattle can be crossed with native cattle profitably, the native thereby becoming larger and obtaining their full development more rapidly.

There are no diseases among the cattle, especially in the north and in the Chaco. In the south, one meets sometimes with blackleg, but even then only among calves, and the percentage of such cases is never alarming.

The northern Paraguayan cattle are very similar to Texas stock, being perhaps of a better class and certainly tamer and more easily managed. The southern cattle are inferior. Most of the cattle are found in the north of Paraguay. Land for ranches ought to contain four or five well-known grasses and be well watered. Good grass is found in some parts in the level prairie land, and in others in the woods and highland prairies. The best fattening grass known in Paraguay grows on the riverside.

At present, there might be sufficient cattle in the north of Paraguay for a small beef industry. There is no doubt that in three or four years, should this business be seriously started, there would be enough cattle for a big beef industry, for many landowners dare not invest more money in cattle for fear of having no outlet. There are also many persons who have lands and want to sell them because they have not the means to stock them. Interest on money is very high—30 and 40 per cent and sometimes more. There is no law on

usury, and there is so much demand for money that capitalists command their prices.

The wages for a peon (native cowboy) are about $3 a month. His food will cost as much. A capatas, or overseer, is paid from $8 to $12 gold a month. A native major-domo, or chief overseer, gets about $50 gold a month. The native major-domo is necessary.

The Paraguayan climate is excellent for cattle, as losses in winter or by a dry season are unknown. English and Americans living in Paraguay have no trouble to become acclimatized.

In view of the cheapness of stock, I think Paraguay will be the future field for the cattle industry in South America.

THE MANAVI, OR JIPIJAPA, HAT.

A report recently made on this subject* seems, from the number of letters received at this consulate, to have excited considerable interest among hat dealers in the United States. They appear to be anxious to purchase in quantity, if they can have the hats made in the styles which their custom demands. This, I am told, will be more difficult than indicated in my former report. There are no regular factories, the industry being carried on principally by natives of the coast, who plait the hats at home, working only when they feel so inclined. Life is so easy in this tropical land that the spur of necessity is seldom felt.

The exporting firms Sucesores de Norverto Osa & Co. and Paul Gonsenbach, esq., of Manta, are endeavoring to induce the natives to make the shapes desired. The house Sucesores de R. Valdez is also prepared to make similar efforts, and say that, in their opinion, quite a business can be built up with Peru, where the hats are also manufactured from Ecuadorian straw. The town of Catacaos, situated in Piura, the northernmost province of Peru, contains an Indian population of some 20,000, whose principal, if not sole, industry is the manufacture of hats. These people are stated to be much more ready to make the shapes demanded than the coast natives of Ecuador.

Dealers who may care to correspond with these gentlemen should furnish blocks or models of the exact shapes desired. In addition to hats, yachting caps, cigar cases, table mats, and other fancy articles combining utility, novelty, and taste are made from the straw.

PERRY M. DE LEON,
Consul-General.

GUAYAQUIL, *November 10, 1900.*

*ADVANCE SHEETS No. 821 (August 30, 1900).

RAILROAD PROGRESS IN ECUADOR.

GUAYAQUIL-QUITO ROAD.

In my report on the commerce and industries of Ecuador, transmitted last year,* certain statements were made regarding the Guayaquil and Quito Railroad from information which I have since found to be inaccurate and highly colored. As a matter of fact, the work done was very much less than represented, and grave mistakes were made in the location of the line, as evidenced by landslides during the past winter which simply buried out of sight the track which had been graded and rendered its restoration hopeless. A company called the "Ecuadorian Association" has now been formed, which has bought out the Ecuadorian Development Company. The association, it is said, represents New York, London, and Edinburgh capital; it has a number of mining engineers in the country who are actively prospecting, and it has made a contract with the J. P. McDonald Company to build the road to Quito. Mr. McDonald is from Knoxville, Tenn., and is an experienced railroad contractor; he has recently built a road of considerable length for the British Government in Jamaica through a rough, mountainous country.

I am told the line now adopted, which follows the valley of the Chan-Chan River, is not liable to serious danger from landslides. Work is being prosecuted with energy, and a considerable portion of the route to Sibambe (about 50 miles distant from Chimbo), the most difficult part of the line, is already graded and ready for rails. Nearly three thousand Jamaica laborers are at work, and a couple of thousand more are expected during the next two months; six hundred arrived last week. This labor, although inferior to that of the American negro, is better than native, which is not only scarce, but unreliable. A number of American engineers, subcontractors, and foremen are employed on the works; but there is need for many more, especially for the two latter classes. Competent and sober men can find employment as clerks, and several good stenographers who can speak and write Spanish as well as English can find employment.

The road will be about three hundred miles in length and will pierce the heart of the Andes. It will cost $18,000,000 and require from four to five years to complete. It will rival, and in some respects eclipse, the famous Arroya road in Peru. The engineering department and general management are under the control of Maj. John A. Harmon, of Virginia, an ex-officer of the United States Army.

* See Commercial Relations, 1899, Vol. I.

Parties interested can address F. C. Dunn, esq., Guayaquil, Ecuador, and the Ecuadorian Association, New York. Men from the South are preferred at present, as being better able to withstand the trying rainy season. A healthy region is found near Sibambe.

This enterprise will doubtless stimulate commerce between the United States and Ecuador; California especially should find a good market for her groceries, provisions, wines, etc.

RAILROAD FROM BAHIA DE CARAQUEZ TO QUITO.

The recent Congress granted a charter to a French syndicate for this road. Bahia de Caraquez is a small port on the Pacific.

RAILROAD FROM PUERTO BOLIVAR TO ZARUMA.

It is a matter of general regret that the bill granting a concession to George D. Mumford, of New York, and his associates for a line from a point near Puerto Bolivar to Zaruma was defeated. The bill passed the House by a large majority, but was lost in the Senate by one vote. Messrs. Mumford & Co. proposed to build the road at their own expense, without any guaranty from the Government. The enterprise, I am informed, was backed by New Yorkers, some of whom are interested in the Zaruma mines and whose only stipulation was the mineral rights for a certain distance on either side of the proposed line; the Government to receive 20 per cent of any profit accruing from the development of the supposed deposits.

This line, which would have traversed the only mineral belt of Ecuador so far known, was intended to be extended later to the "Oriente," where fine rubber forests, valuable hard woods, and gold deposits are to be found. It is to be hoped that the next Congress may reconsider the action of the last and grant the charter.

WAGON ROAD FROM SIBAMBE TO QUITO.

I am informed by the McDonald Company that a contract has been recently made with the Government to construct this much-needed road, which, starting at Sibambe, will join the highway now in operation at some point near Chuquipollo.

PERRY M. DE LEON,

GUAYAQUIL, *November 15, 1900.* *Consul-General.*

NEW RAILROAD CONNECTION BETWEEN QUEBEC AND VERMONT.

I have to report the leasing and reconstruction of a railroad in my consular district. The old road, owing to its inability to meet liabilities, was closed to traffic fourteen or fifteen years ago. The ties have decayed, and in many places the culverts have caved in;

but in general, the roadbed is still in a fair condition. The Central Vermont Railroad (an American company) has leased this road for the term of ninety-nine years and has already commenced the work of reconstruction. New ties have been bought, and steel rails will replace those which have become useless.

This road will open up a new agricultural section of Quebec and will, in a measure, increase the trade between this district and the United States. It extends from St. Lambert, near the end of the Victoria Bridge, opposite Montreal, via Chambly (this section is now built and in operation) to Frelighsburg and the Vermont line, a distance of 53 miles; from this point it extends to Sheldon Junction, a distance of 9 miles, where it connects with the Central Vermont Railroad, leading to St. Albans, a distance of 9 miles, and also with the Boston and Maine, running south to Cambridge Junction, and thence to Essex Junction and Burlington, Vt. From Cambridge Junction, the same line runs eastward to St. Johnsbury, connecting with the direct line of the Boston and Maine for Boston and all points south and west. The part of the road which is now being built is from Farnham to Sheldon Junction, Vt., a distance of about 25 miles. This road will, in a measure, injure the local traffic on the Canadian Pacific road from Farnham to Stanbridge, for the reason that freight will now be carried direct to places on the new road, instead of being delivered to Bedford for retransportation by teams.

FELIX S. S. JOHNSON,
STANBRIDGE, *October 26, 1900.* *Commercial Agent.*

NEW CANADIAN GRAIN ROUTE.*

The Great Northern Railroad has been completed, and regular trains are now running between this city (Quebec) and Parry Sound, on Lake Huron. The company has built a large elevator here, and last Saturday commenced loading a steamer with grain transferred from cars to elevator and elevator to ship.

This road is the connecting link of the Canada Atlantic with the Quebec and Lake St. John Railroad. The grain from Chicago and Duluth is brought in large steamers to Depot Harbor, on Parry Sound, Georgian Bay; hence by Canada Atlantic via Ottawa to Hawkesbury, the western terminus; then by the Great Northern to Riviere à Pierre, where it connects with the Quebec and Lake St. John Railroad, 58 miles from Quebec, where the largest ocean steamers can be loaded from one of the best elevators in this country, which has just been completed, as I understand, by capital from the United States. The elevator is of modern construction, it is

*A report covering the same subject has been received from Consul Brush, of Niagara Falls.

situated on the Louise Dock, and is 182 by 100 feet and 75 feet high. Its storing capacity is 1,000,000 bushels.

It is claimed by the promoters of this line that it is 800 miles nearer Liverpool than from Chicago or Duluth via New York, and they expect to do a large business next season and demonstrate that this is a shorter and cheaper line from the Great Lakes to Europe.

WM. W. HENRY,

QUEBEC, *November 20, 1900.* *Consul.*

GREAT LAKES AND HUDSON BAY RAILWAY.

The talk and plans of decades have finally taken form, and a railway connecting the Great Lakes with Hudson Bay is now actually under construction. The railway plunges hundreds of miles through an unbroken wilderness, with no cities, towns, or even villages to afford traffic. In fact, only Indian guides and hunters have ever attempted to penetrate the great wilderness to the north. Nevertheless, the railroad, which is known as the Algoma Central, is being built in the most thorough manner possible, with the best equipment available, able to stand almost any strain upon it, and capable of good service for years to come. Eighty-five-pound steel rails are used, and the locomotives are of enormous size, weighing 135 tons when equipped for traffic. The engines are so massive that railway companies were afraid of the strain on bridges, and they were delivered from Chicago to Sault Ste. Marie by the lake route on steam ferries.

The new railway starts at Sault Ste. Marie. Ground was broken less than ninety days ago, but already 25 miles of road are completed and in use, and the railway is pushing forward at the rate of half a mile a day. It is expected that it will require three years to complete the road.

The millions of capital involved came mostly from the United States, but the builders have made careful computations as to traffic and are confident that the road will realize all that is promised as an investment. It had its origin in the necessity of bringing supplies of pulp wood from the far north to the Sault mills, but it opens up as well a region that is fabulously rich in minerals and timber. The mineral wealth is said to be practically inexhaustible, consisting of mountains of iron, copper, and other valuable ores. Among other discoveries is that of a solid bed of gypsum 8 miles in length.

In timber, the supplies are equally valuable. For hundreds of miles, it is claimed, the railway will run through dense forests of big

trees, including birch, maple, hard elm, tamarack, spruce, balsam, poplar, and white pine. Curly birch, which can now be bought along the railway for 40 cents a cord, commands $40 a thousand feet in the United States. Elm wood that can be cut at 10 cents a cord sells for $25 a thousand feet at Minneapolis and other points in the Northwest that are within easy shipping distance.

The Ontario government is greatly interested in the opening up of this rich territory, and has aided in the construction of the railway by a big grant of land. At the end of the first 15 miles, the railway commenced to haul heavy consignments of timber, and traffic is following closely upon construction.

It is announced that particular attention will be given to transit traffic, and at every stopping place a first-class hotel will be built by the railway. At Hudson Bay, it is proposed to establish a modern seaside hotel. Game is plentiful, and scores of lakes and rivers that are teeming with fish will be reached by the railway. The scenery, bracing climate, hunting, and fishing are expected to attract thousands of tourists. The railway also intends to handle Hudson Bay fish products on a large scale.

If the plans of the officials are all carried out, the new railway to the north, reaching as it does to the very slopes of the Arctic Ocean, will be one of the most daring and picturesque attempts to subjugate a wilderness known to railway annals.

HARLAN W. BRUSH,

NIAGARA FALLS, *November 21, 1900.* *Consul.*

CANADA'S TRADE WITH GREAT BRITAIN.

For the ten months ended October, 1900, official returns show the following increases in British imports from Canada:

Articles.	Amount.	Articles.	Amount.
Cattle	$667,577	Cheese	$4,029,067
Wheat	1,951,286	Eggs	209,260
Oats	1,745,305	Fish	1,167,220
Pears	141,108	Pulp wood	311,156
Bacon	1,474,450	Hewn wood	253,088
Hams	625,912	Sawn wood	1,692,222

The decreases are as follows:

Sheep and lambs	$194,660
Wheat flour	3,309,220
Maize	656,978
Butter	1,858,003
Horses	166,461

The increases in British exports to Canada are:

Articles.	Amount.	Articles.	Amount.
Salt	$116,798	Pig iron	$72,998
Spirits	160,595	Tin plates	340,655
Wood	82,630	Unwrought steel	102,197
Cotton and piece goods	613,179	Unwrought tin	77,867
Jute piece goods and linen piece goods	72,998	Apparel and slops	155,578
		Alkali	116,798
Woolen tissues	501,258	Cement	126,529
Worsted tissues	223,859	Seed oil	102,197
Carpets	160,595	Printing paper and envelopes	68,133

The decreases in exports are:

Railroad iron	$394,187
Hoops, sheets, and boiler plates	126,529
Cast and wrought iron	72,998
Lead	97,330

FELIX S. S. JOHNSON,
STANBRIDGE, *November 12, 1900.* *Commercial Agent.*

COINAGE OF SILVER IN MEXICO.

Consul-General Barlow, of the City of Mexico, November 24, 1900, sends the following circulars (printed) issued by the Finance Minister, affecting the introduction into the mints of bars for coinage:

With the object of increasing the facilities which the regulations of March 27, 1897, afford to the producers of silver bullion for the introduction into the mints of bars for coinage, the President of the Republic has been pleased to direct that, until further orders, the director-general of the mints shall give instructions for the admission into those establishments and into the federal assay offices of bars eight hundred and fifty one-thousandths fine, in lieu of the standard of nine hundred one-thousandths in fineness established as a minimum by article 9 of said regulations; provided that, in the opinion of the director and in consideration of the object sought, the nature of the bars in question does not hamper the work of the mints.

In order to increase the coinage of the national money and to relieve as far as possible the uneasiness caused by the scarcity of currency, which is exported in abundance due to the premium commanded by our dollars in foreign markets, the President of the Republic, desiring to stimulate the introduction of mixed bars into the mints, has been pleased to direct that from December 1 next until March 31 of the coming year of 1901 the tariff of separation dues (derechos de apartado) established by Section IV of article 1 of the decree of March 27, 1897, shall be reduced to the following rates:

When the proportion of gold does not exceed two hundred one-thousandths, per kilogram	$0.75
When the proportion of gold exceeds two hundred and does not exceed four hundred one-thousandths, per kilogram	1.20

When the proportion of gold exceeds four hundred but not six hundred one-thousandths.....per kilogram... $1.60
When the proportion of gold exceeds six hundred one-thousandths, per kilogram..... 2.00

In no case shall less than 50 cents be collected.

THE CURRENCY OF PERSIA.*

The Department is in receipt of the following report on the currency of Persia (made by J. Rabino, director of the Imperial Bank of Persia), forwarded by Consul-General Bowen, of Teheran, October 17, 1900:

GOLD CURRENCY.

No gold is produced in the country, nor is any bar gold imported.

Gold coin is a commodity only, and is mainly used for presents and hoarding; it is minted from foreign coin, such as Russian imperials and Turkish pounds, which reach this country in small quantities in the course of business.

Goldsmiths also make use of foreign coin.

SILVER COIN.

No silver is obtained in the country; imports come directly from the United Kingdom or indirectly from Russia via Hamburg.

The mint is in a wretched condition, and the plant, which dates from 1877, is worn out and in many cases useless. The output is therefore very limited and at best may be put down at 3,000,000 to 4,000,000 tomans annually—the toman being practically equivalent to an American dollar.

This year, the Government, in connection with the Russian loan, imported about 3,000,000 tomans' worth of silver, which is in course of minting, and the Imperial Bank imported a further 1,000,000 tomans, which has been minted. We may add probably 500,000 tomans for other importers.

Last year, the amount minted can scarcely have exceeded 2,000,000 to 2,500,000 tomans.

On account of the deficiencies of the mint machinery, of the eastern practice of hoarding, and of the economic attraction of Transcaspia for Persian silver, there is a permanent dearth of currency, which consequently is appreciated and circulates at a purchasing power of from 5 to 20 per cent above its intrinsic value.

The attraction of Persian silver to Transcaspia needs no explanation.

Persian silver is a standard or international currency, although very defective, being usually some 2 per cent below legal weight and fineness.

Russian silver is a token currency, or at best midway between a token and a standard or international currency; there is, therefore, in an equivalent amount of exchange a much larger quantity of silver in Persian than in Russian coin. For example, 100,000 tomans are, at the present rate of exchange, equal to 185,000 rubles; but the weight in fine silver of the tomans is legally 133,200 ounces troy; or, say, less 2 per cent, 130,536 ounces; whilst the rubles contain only 107,062 ounces; difference in favor of the Persian coin, 23,474 ounces, or 21.92 per cent.

The Russian authorities have long been alive to the irresistible competition of

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*This report is in answer to inquiries by the Director of the United States Mint, who has received ADVANCE SHEETS.

Persian with Russian coin in their Asiatic provinces on this frontier, and some nine years ago issued a decree forbidding the importation of Persian coin.

This decree was found unworkable, and after some months had to be withdrawn.

Last year, the Russian Government again made a stand against the import of foreign silver, which, by ukase, was prohibited on and after May 1-13, 1899. The prohibition was further strengthened by a duty of 3 rubles per pood on silver—say, 20 per cent.

Since then, however, Persian coin has been largely imported in contraband into Transcaspia, and the Government finds great difficulty in putting a stop to its introduction.

There is a large yearly outflow of coin from Teheran, where it is minted, to the north, northeast, and northwest districts, and this coin so far does not reappear—at all events, not in any quantity—so that the product of the silver imports seems to be absorbed.

SUBSIDIARY, OR TOKEN, COINAGE.

The most flagrant abuses have long prevailed in the excessive overissue of copper coin, due to the iniquitious system of farming, the ignorance of the authorities, and the corruption of officials.

Copper, nominally issued at 20 shais per kran, was current at 30, 40, 50, and even 80 shais per kran. As this currency constitutes the whole fortune of the poor, the sufferings caused by the maladministration of the mint may be imagined.

When the present Shah came to the throne, it was found necessary to take some steps to put an end to this state of affairs, and the Government withdrew some 720,000 tomans nominal of the copper coin at 25 to 30 shais per kran.

Since then things have gone better; the copper is, however, discredited, and at present there is a dearth of small change.

To remedy this, the Government has had minted at Brussels 150,000 tomans of nickel 1-shai and 2-shai pieces, which it is expected will improve the situation.

BANK NOTES.

The Government issues no bank notes, and in 1889 granted the Imperial Bank of Persia a monopoly for the issue of paper money, which circulates on the basis of the credit of the bank.

The legal specie reserve is 33 per cent, but in practice the reserve is 60 per cent and more.

Necessarily, the building up of a note issue is a slow process, but the people are getting used to it, and, in Teheran particularly, the notes are highly appreciated.

The following figures show the note circulation of the Imperial Bank of Persia on the 20th of September each year:

	Tomans.
1890	28,900
1891	99,000
1892	194,000
1893	207,000
1894	334,000
1895	254,000
1896	415,000
1897	203,000
1898	365,000
1899	589,000
1900	1,058,000

Gold and silver bullion is imported in small quantities for industrial purposes.

ELECTRICAL INDUSTRIES IN BANGKOK.

The development of the electrical industries in Bangkok presents some interesting features to the trade just now. The Bangkok Tramways Company, Limited, received from the Government in 1887 a concession for a street railway. This line was built in 1889 for horse cars and changed to an electric-trolley system in 1892. It is 6 miles in length, and has been doing a constantly increasing business and paying well from the start.

The city of Bangkok is at present lighted from an incandescent central lighting station. This plant was purchased in Great Britain in 1890 by a Siamese company for the purpose of lighting the King's palace and for the use of the public. It was not operated, however, until 1894, as the company met financial difficulties. In 1897, the plant was turned over to the Bangkok Electric Light Syndicate, which had a twenty years' exclusive franchise to furnish lights for the Government and for the public; again, in January, 1899, it changed owners, going into the hands of what is at present known as the Siam Electricity Company. From the time this plant was turned over to the Bangkok Electric Light Syndicate, it has been operated well and has proved a fairly paying investment.

The present company has increased its capacity from 10,000 to 17,000 lamps, and has installed at the present time over 10,000 lamps. The second annual report of the directors to the shareholders shows a dividend at the rate of 4 per cent for the half year.

Perhaps the most interesting feature just now is the fact that the Bangkok Tramways Company, Limited, and the Siam Electricity Company are being consolidated under the name of the latter. This new company has just secured a concession from the Government to build 5½ miles of street-railway line through the most promising portion of the city of Bangkok. Thus it will be seen that the Siam Electricity Company now not only controls the concession for lighting the entire city, but such concessions as have thus far been granted by the Government for building street railways. The capital of this company will be about $500,000 gold.

Orders for the supplies have already been placed, and it is expected that the road will be in operation by the end of next year.

Before consolidation, the light company furnished power only during the night, but since that time it is advertising electric power for both night and day use. This will probably be taken advantage of by many of the smaller manufacturing interests of the city and may in itself create quite a demand for electric supplies. In connection with this, it may be mentioned that the directors of

the company have under contemplation the introduction of electric automobiles, to which they propose to furnish power. Few cities are better adapted to the use of automobiles than is Bangkok. The streets are absolutely level, and the pavement, which now covers many miles, is being rapidly extended in all directions.

Besides this company, there are thirteen private electric plants installed in the rice mills of the city; two of the forts have their own plants; five ships of the navy are lighted by electricity; the navy-yard is supplied with five or six portable dynamos; and a large installation is owned by the Bangkok Dock Company.

Another company is just now endeavoring to get a concession from the Government to build a street railway on the other side of the river.

The city of Bangkok lies on both sides of the Menam. This river is quite wide and has a tidal variation of from 6 to 11 feet. The current varies from that of a calm stream to the treacherous torrent of the high-water season. Water craft of every description abound—from the ocean steamer to the little ferry boat of the native. There is no connection between the two parts of the city, and, as a result, that portion lying on the left bank of the river has enjoyed all the modern improvements, while that on the right bank has been neglected. This condition of affairs, however, must soon change, for the new railway, which runs south to Petchaburee and will be completed within a year or two, will extend through that portion of the city on the right bank of the river and must cross the stream to find access to the present mercantile city, either by a bridge or by a closely connecting ferry.

All these developments in electrical lines have taken place during the last ten years, yet the growth to-day is far more rapid than ever before. The three companies that import electric supplies report that their business has more than doubled during the last twelve months, while to my personal knowledge their orders during the last two months have exceeded those of any twelve previous months. There is a large and rapidly increasing business along this line in Bangkok, and there is no reason why the United States should not get a generous share. The tendency is toward the American market. The orders for the entire supplies for the new tramway, during the last two months, have been placed in the United States, with the exception of the rails. The order for the rails went to England, because the company thought they were unable to secure the peculiar kind they wished in any other country. This, however, I believe, is largely due to want of information on the subject, a cause which more familiar acquaintance with our manufactures will no doubt set aside. Again, a large quantity of the American electrical goods used here

comes through London and European houses. This is another obstacle that can be removed by our manufacturers placing themselves in direct communication with importers here. American goods are in favor, and the prices suit. The importers complain of American lack of promptness in attention to business. While goods are delivered here in three months from the time they are ordered from Europe and England, seven or eight months, and sometimes more, are consumed in getting them from the United States. This delay should be remedied. It is within my knowledge that answers to important cables have been delayed a full month.

I quote from a letter just received at this office from one of the leading importers of this city:

> My experience in doing business with the United States for the last ten years is that, generally, in the United States you get for the same money a better article than in most European countries; but, with few exceptions, American firms are not prepared for business with distant countries. Some of them have not even a cable address, and nearly all are slow and unsystematic in their correspondence. * * * Shipping arrangements to Siam are also defective, as much as four or five months sometimes elapsing between shipments from New York (whence we get most of our goods) and arrival in Bangkok.
>
> In consequence, we often prefer to order dearer or inferior articles from Europe, to avoid delay and uncertainty.

The packing of the goods, I am pleased to report, has been materially improved during the last year. While one lot has come in a most unfortunate condition, yet the importers, on the whole, report satisfaction in this line now. It is to be hoped that the improved condition of shipping with all the Far East that will come with our more direct communication with the Philippines will remedy some of these difficulties; and this, together with attention on the part of our manufacturers to those points to which reference has already been made in this article, will put America in possession of her share of this trade in Siam.

I call attention to the following extract from an interesting letter from Vice-Consul-General L. E. Bennett, which appeared in the Engineering News recently. Since Mr. Bennett wrote, I learn that the contracts are being made in this city and not in Copenhagen:

> With reference to present work in Siam, I beg to state the following:
>
> *Tramways.*—Mr. A. Westenholz has just secured a new concession to make about 5 miles of new electric-street-railway line in the city of Bangkok, and has effected the consolidation of the present existing street-railway line, about 6 miles in length and operated by electricity, with the Electric Light Company, so that the present central lighting plant and the existing electric-street-railway line and the new proposed line of about 4 miles will all be operated as the Siam Electricity Company, Limited. Their capital will be about $500,000 gold.
>
> The electric power will be supplied by the lighting company, which will now run day and night, and some additional machinery will be required by the com-

pany for operating the new lines; also rails, ties, fastenings, insulators, and copper conductors.

The existing line of about 6 miles in length will require, at the same time, to be relaid with new rails, as the present rails are about worn out.

This work will probably be started at once.

The leading importers of electrical supplies in this city are the Siam Electricity Company, Limited, the Siam American Trading Company, and the Bangkok Dock Company.

HAMILTON KING,
Consul-General.

BANGKOK, *October 15, 1900.*

ELECTRICAL GOODS IN CALCUTTA.

Electricity as a motive power has not been used in Calcutta; but the Calcutta Tramway Company, Limited, is now preparing to change its lines from horse power to electricity, and the contract for the power station has been given to Messrs. Dick, Kerr & Co., Limited, of London. The first shipments for the plant are expected to arrive here in November or December of this year.

I have answered many letters from our various electrical companies relative to the use of electricity here, calling their attention to the proposed change in the tramway company's lines, and believe that, with proper efforts on their part, the contract might have been secured, as Americans are now competing successfully with the English companies, even in London.

Electricity is now beginning to be extensively used in Calcutta for various purposes, such as lighting, fans to take the place of punkhas that were pulled by coolies, for driving machinery, etc., and there is an opening here for the sale of electrical machinery and goods, which our manufacturers should take advantage of.

I would advise correspondence with Messrs. Kilburn & Co. here, who have an electrical plant and are furnishing electricity and electrical machinery and goods; also, with the following-named firms in Calcutta, who are dealers in such machinery and goods, viz, Osler & Co., Octavius Steel & Co., and the Calcutta General Electrical Company.

All machinery is now entered duty free in India, but there is a duty of 5 per cent ad valorem on goods.

There is a direct line of steamships between New York and Calcutta, but a cheaper freight on machinery and goods not required for immediate use would be by sailing vessels via the Cape.

R. F. PATTERSON,
Consul-General.

CALCUTTA, *October 16, 1900.*

AMERICAN EXPOSITION IN CONSTANTINOPLE.

The exposition of American goods and products which was established last year in Constantinople* under the name of the American Oriental Agency is already a success and has outgrown the expectations of those who are conducting the business. They have found their accommodations inadequate, and have recently rented and removed to a large building centrally located on the principal street of the business part of Constantinople.

This change was contemplated and the details arranged before I left my post. The removal has since been made, and, as the business has ample capital and large commercial experience in its management, it ought to prove a pronounced success. Consul Ravndal, of Beirut, writes me of a recent visit to Constantinople as follows:

> I spent three hours with the manager of your American exposition there. It has elegant quarters centrally located and certainly promises great results.

It should be understood, however, that the markets of the East are not waiting for American goods. They are already occupied by the English, German, French, and other nations; and the entering wedge of American commerce is not to be driven into those markets without intelligent, persistent, and vigorous blows. There will be no rush of American products, except in such articles as wire nails, railway materials, rails, and other iron goods in which our prices are clearly below foreign competition. Trade generally must be exploited and built up by the same means and methods used in other localities where the field has been preempted, especially as those who have enjoyed a monopoly of these markets are shrewd enough to be extremely jealous and apprehensive of American rivals.

As there seems to be some misapprehension concerning the aim and scope of this exposition and American Oriental Agency, I beg to offer an explanation as to what it is and what it is not.

It is an exposition, because it carries a large line of samples of American goods of great variety, as well as a stock of staple goods which find ready sale in the Turkish markets. But it is not merely an exposition; it is a business enterprise conducted for profit, with every facility which extensive capital, a knowledge of foreign languages, experience, and brains can employ.

Nor is it a "close corporation." Any American manufacturer who wishes to put his goods on the markets of Turkey, Egypt, Greece, the Balkans, and southern Russia can join this enterprise without the payment of a single dollar and with the assurance that

* See ADVANCE SHEETS No. 613 (December 27, 1899); CONSULAR REPORTS No. 233 (February, 1900).

every reasonable effort will be made to find a market for his products. If they are sold, credit is not given to Tom, Dick, or Harry, who may be irresponsible, but the exporter deals directly for cash or on credit, as may be agreed, with W. S. Bigelow & Co., of 116 Broad street, New York, or with the American Oriental Agency, whose proprietor, Mr. L. Zarifi, is one of the leading bankers of Constantinople. Neither he nor Messrs. Bigelow & Co., who represent the American end of the combination, can get any return for their labor and expense except by selling the goods of the parties they represent and making a profit thereon.

This is the only method by which an individual exporter can reach the foreign market, and I maintain it is the only true method. The middleman who connects the exporter with the foreign consumer must be directly interested in selling goods and getting his pay. If he derives compensation in any other way, he is almost certain to relax his efforts. Moreover, in this case the exporter pays, if he pays anything, not for rainbows or promises, but for actual results. By combining large and varied interests, the American Oriental Agency can afford to do what would be impossible for a smaller concern, to wit, canvass the market thoroughly, with the understanding that it is to derive no profit unless sales are actually made.

I beg to add a few words as to the connection of my office with this enterprise. There is not a man connected with it who derives a penny of profit from the business, either directly or indirectly. They are all employed and paid by the Government, and their interest in this work is due to the fact that it is a part of their business to advance and protect American commerce in every form.

After Barber & Co. were induced, early in 1899, to make direct sailings from New York to Constantinople, Smyrna, and other levantine ports, the necessity of establishing an exposition, agency, or depot to supply American goods was apparent. There are plenty of people anxious to represent American exporters, but most of them are irresponsible or are interested in the sale of foreign goods with which we compete. I made several efforts to interest commercial organizations in the United States in this project, but received no substantial encouragement.

Then I induced Mr. Zarifi to finance the enterprise and become responsible for its credits. It has required hard work and large expense on his part, and also on the part of W. S. Bigelow & Co., but it is now well started; and, conducted as it is with sagacity and energy, I believe it offers the safest and best possible medium for reaching the Mediterranean markets. Branches in some of the principal cities have already been established, and negotiations for

others are well advanced. Mr. Zarifi undertakes to cover with thoroughness Turkey, the Balkan States, Egypt, Greece, and southern Russia, and no one who has made inquiry in regard to his responsibility and long business experience in many enterprises has any question as to his ability to make a success of the undertaking. The agency already represents nearly two hundred American exporters, who are leaders in their respective lines, and negotiations are pending with a number of others.

The director and the active manager of the stores at Constantinople have had wide commercial experience in the East, and they and their employees impress me as men of unusual activity and earnestness. I have no hesitation in recommending the enterprise, with the caution I have already intimated—that quick results in general lines of American goods should not be anticipated. It takes time to put American goods on a new market already accustomed to goods of European manufacture, and if Bigelow & Co. and Mr. Zarifi are willing to continue their expense and effort and devote all their energies to this project while the introductory and educational process is going on, the exporter should not be impatient if he fails to get immediate results.

CHAS. M. DICKINSON,
Consul-General at Constantinople.

BINGHAMTON, N. Y., *November 15, 1900.*

THE AMERICAN REPUTATION IN TRADE.

In a previous report,* I expressed the opinion, based upon careful observation, that, "generally speaking, it is considered in Scottish communities that to say an article is American is to commend it." Further observation confirms this opinion. It is worth noting, as an illustration, that a recent issue of a British trade journal contained a paragraph to the effect that a Scotchman who had invented a mechanical device complained to a friend that he could not dispose of it, although it was an excellent thing; whereupon the other ingenious Scotchman advised him to advertise it as "the latest American invention," which he did, effecting a sale in a short time and at a good profit. I do not vouch for the story, but can vouch for something quite as much to the point, as follows:

In the Edinburgh Directory for 1900 appear the company name and business designation, "Smith & Wellstood, Limited, American stove manufacturers, general iron founders," etc. They have offices and warehouses in this city and extensive works at Bonnybridge,

*See CONSULAR REPORTS No. 222 (March, 1899), p. 423; ADVANCE SHEETS No. 322 (January 12, 1899).

Stirlingshire. The foundry is called the "Columbian Stove Works," and the stoves principally advertised in Edinburgh and elsewhere by Smith & Wellstood, Limited, as "American heating stoves" and "American cooking stoves." I have seen some of the stoves, both heating and cooking, and can testify that they are faithful copies of American designs. Not long ago, I sought for information from this company as to the styles and prices of their American patterns. The secretary replied courteously, by letter, that they must refuse my request, inasmuch as they "could not expect to do any business in the United States, owing to the tariff;" and he calmly added, not intending to be droll, that "it is as much as we can do to give attention to those markets where there is a fair field for our enterprise." To what extent the company has succeeded in its enterprise of selling "American" stoves of their own manufacture in the British and other markets, I have been unable to ascertain.

Another bit of evidence of the high reputation of the American name attached to manufactures came to my notice last week. Among the placards in the windows of the leading stationery store in this city is one which reads, "Real American playing cards," the word "real" being underlined. Any comment upon this placard would be superfluous.

RUFUS FLEMING,

EDINBURGH, *November 19, 1900.* *Consul.*

GERMAN VS. AMERICAN EXPORTS AND INDUSTRIES.

I submit two interesting articles which appeared lately in the Leipziger Tageblatt, the most prominent newspaper in this city. The first gives a German view of the exports from North Germany to the United States during the third quarter of 1900, and indicates that the Germans are well satisfied with the present export trade to the United States and with the prospects for the future. In the second article, American manufactures and exports are discussed. The writer praises very highly the American manufacturer, his methods, and his relations with the American workman. He compares them with the German manufacturer and workman, and, although he does not anticipate any danger from American competition at the present day, he nevertheless warns the Germans to be on the qui vive, and recommends that they imitate the Americans not only in their activity, but also in methods of manufacturing. He gives some good hints in regard to consular service, discusses the proposed imperial bureau of commerce, etc.

I may add that I find, through my commercial observations, that although the import of American articles of manufacture into Germany is regarded with fear by some of the Germans, a larger part of the people rather welcome these importations, on account of their good quality at relatively low prices, and also because the keen competition acts as an incentive to Germans to bring their products to the highest possible point of perfection.

NORTH GERMANY'S EXPORT TO THE UNITED STATES.

During the third quarter of 1900 trade was brisk in Germany, as well as in the United States, and, although in certain branches of industry—namely, iron and cotton—there was a certain stagnation, this passed off without any perceptible influence on the other branches of trade. The Americans have had a splendid harvest, with good prices, and the export of manufactured articles reached a figure never before attained; in short, they have made money and were consequently enabled to buy foreign goods in large quantities. Our export trade with the United States was quite satisfactory, showing an increase of 12.8 per cent. Should the last quarter of this year show as good results as the third quarter, the commercial interests will begin the new century on a very friendly footing. It is certainly time that we should arrive at a satisfactory standing, as we have lived through some very bad times toward the end of the nineteenth century.

The differences between the consular districts are quite conspicuous, some of them showing a heavy falling off (for instance, Berlin, 23 per cent) and others an immense increase (Stettin, 163 per cent). This is accounted for in that the trade with America is by no means even and steady, but changes according to fashion and times. The decrease in Berlin's exports is accounted for in that the American leather trust has effected an extraordinarily large import of European hides into the United States within the last few years. In regard to the increase of exports, Magdeburg exported, among many minor articles, two principal products—Stassfurt potassic salts and sugar. The potassic salts are divided into kainit, kieserite, sylvinit, chloride of magnesium, muriate of potash, and fertilizing salts. These are indispensable for some manufactures and especially for the American farmer.

The second article—sugar—is our child of sorrow, because it is subjected to all sorts of chicanery and abuse and a heavy duty. For this reason, it is sold in the United States only when none is to be had from other countries. We disposed of $357,000 worth during the third quarter of 1900, against $11,000 worth for the same period of 1899. Thus potassic salts and sugar have effected the great increase in exports.

With exports amounting to $13,000,000 for the third quarter of 1900, North Germany may well be satisfied; but still we must remember that during the first quarter of 1900 the exports amounted to $18,106,925, showing a considerable difference in favor of the first quarter. Should the last quarter make as good a showing, we can consider the first year of the new century as one of our best.

EXPORT AND INDUSTRY.

The United States Government has published a statistical work in regard to the value of the industrial production of the principal countries. The reasons given for the preeminence of the North American production deserve our attention more than the figures which they accompany, as the figures can only be based upon estimates. However, these are by no means uninteresting. They are as follows: Value of industrial production of the United States, $7,000,000,000; Great Britain, $4,100,000,000; and Germany, $2,915,000,000 (certainly too low).

In accepting this view of the relative standing of the United States, Great Britain, and our own country, we must not lose sight of the fact that the North American Union is only at the beginning of its industrial development, while Germany's industry is at a stage where it can be seen that it is nearing the utmost bounds of development set by existing natural conditions.

In regard to the intelligence of the American workmen in general compared with our own (American manufacturers recruit their workmen from Germany to a great extent), the former will hardly have an advantage. However, we must unreservedly admit that in the machinery employed in modern manufacture, we are considerably behind the Americans. The great amount of natural power at the disposal of the American manufacturers—the "white fuel," as the great waterfalls are called—has, together with high wages, encouraged the invention and employment of the most ingenious machinery, even in manufacturing articles that the average German still believes can be produced only by hand labor. In this field, we still have much to retrieve if we do not wish to be at a disadvantage in industrial production.

The Americans have the further advantage of possessing incalculable quantities of coal and ore. We may say that, at the present day as well as in the future, they are assured of the never-failing supply of fuel which is as indispensable for them as for their competitors, and therefore will not be compelled to import it from foreign parts, which would naturally add to its cost. We have just had, in the recent coal famine, an illustration of the serious effects a dearth of fuel would have on our industries. We should not delay, therefore, to make preparations to render the repetition of such a calamity impossible, or at least of no great consequence. We must endeavor to make ourselves as independent of power produced by fuel as possible, and, following the example of the Americans, endeavor more than we have in the past to employ the natural power which is also at hand in our country for industrial purposes. The beginning has already been made within the last few years by commencing the construction of large dams, etc., which, when finished, will extend across many valleys in different parts of our country. But even these measures will not be sufficient to meet our future requirements when our fuel and raw materials are exhausted or when the consumption of indigenous materials becomes too expensive to be practical. At such a period, colonies with rich ore and coal deposits would be of inestimable value to us. Viewed from this standpoint, the acquisition of Kyao-chau, which is the richest in ore and coal of any section of territory in the world, will be considered as a most fortunate action on the part of our Imperial Government.

Of the utmost importance to our commerce and industry is the cheapening of our transportation facilities by improving and extending our water ways. The Prussian Government deserves great credit for the perception it has shown in regard to this necessity. It is to be hoped that they will succeed in passing the canal bill through the legislature. Our manufacturers must never lose sight of the fact that cheapness is of the greatest importance in disposing of their productions. The cheaper we are able to produce goods the easier it will be for us to retain our position in the world's markets and to open up new ones. Therefore, our manufacturers should, before all things, bend their efforts to reducing the cost of production. For the disposal of our products we can let our exporters provide, the latter having given excellent proof of their capabilities.

Indispensable also is the closing of more favorable commercial treaties with foreign governments. Space does not allow us to discuss at length the general views (which, by the way, are by no means unanimous) as to the policy which should serve as a basis for such treaties. We confine ourselves, therefore, to urging the necessity of regulating, by a paragraph to be inserted in all commercial

treaties, the treatment of commercial travelers and their samples by customs and tax officials, so that treaty concessions may not be counteracted in effect by obstacles in the way of a necessary branch of the export trade. The law instituted within the past year by the Russian Government for collecting a tax from foreign commercial travelers is an instance of the necessity of such a provision.

It is also very desirable that our consular officers should consider every expedient for furthering our export trade; also, that in appointing consuls more weight should be laid on commercial experience and knowledge of political economy than has been done heretofore; also, on the appointing of professional consuls, and avoidance of continually transferring them from one charge to another, which renders it impossible for them to become acquainted with the peculiar conditions existing in their districts. The appointment of commercial agents or attachés is also to be recommended. Complaints were formerly very frequent on account of the delay in publishing the often very valuable information contained in the consular reports. Since, however, the Department of the Interior has instituted a weekly pamphlet entitled "Nachrichten für Handel und Industrie" (News for Commerce and Industry), which is sent free of charge to interested persons upon application and is given to the press, these complaints have ceased. This publication contains information regarding industry, agriculture, and all tariff and trade conditions, especially of foreign countries. The data is thus communicated to the people to whom it is of vital importance very shortly after it is received.

The creating of the so-called consular attorneys by the Government of Austria-Hungary is an institution worthy of imitation. A written agreement is made by these attorneys with the respective consuls, in which the former bind themselves punctually, conscientiously, and for reasonable fees to look after the interests of Austro-Hungarian subjects. Business men of experience know what it is to be compelled to bring action against unscrupulous debtors, who venture to swindle foreign creditors only when they calculate that the creditors fear to fall into the hands of unreliable attorneys, who will strive to make the costs of a lawsuit as high as possible.

The greatest demand made on State assistance, in the so-called interests of the export trade, is contained in the project for establishing an imperial bureau of commercial information. Many large commercial corporations have already refused to support this project, one of the reasons given being that there is danger of industrial firms conceiving the idea that all help should come from the Government, while the success heretofore attained by our commerce and industry has been solely the result of their own efforts. Undoubtedly, the aim of the manufacturers in urging the establishment of an imperial information bureau is to do away with the export commission houses, so as to avoid dividing profits with them. At present, most of the exports of manufactured articles are made through these firms. It is evident that the manufacturers have a mistaken idea that the export branch of trade is of no great importance; that it requires no especial knowledge, experience, or foreign connections; and that an able and successful manufacturer should also be a successful exporter. The calling of an exporter demands such diverse knowledge and experience that it involves many years of hard work to acquire the same. We call attention, as a proof of the abilities of our exporters and their agents, to the high point to which they have brought our foreign trade; also to the envy betrayed in commercial reports of foreign consular officials. It must fill our manufacturers with pride for present success attained and with confidence for the future to work hand in hand with merchants of whom the Foreign Office in London recently spoke, in regard to Korea's commerce and industry, as follows:

"English merchants could open up many markets in the East if they would

learn the language of the country; but this is apparently the very last idea that occurs to them. The Germans, who are very much more practical than we, realized this very quickly, and now it is an exception to find a German commercial house which has not at least one man who can transact business with the natives in their own language. In Korea there is a German firm and an English firm; it is superfluous to say that the German firm has a German sales agent who speaks the Korean language, and that the English house has no Englishman who knows anything of the language."

But, aside from knowledge and experience in the export trade, it must not be forgotten that it is the good reputation of the German commercial houses and of their managers and their many years' personal and commercial relations with their foreign customers which have done so much toward obtaining orders; and that if our manufacturers dispensed with their agency they would have to begin from the beginning, the same as any other stranger, to win their place in the markets of the world. It is not necessary to say that this would take some time; therefore, the exporters for exportation and the manufacturers for manufacturing. The latter have before them so many difficult problems to solve, which have already been mentioned in the first part of this article, upon the solution of which depends their future success in international competition, that they can hardly think of assuming the cares and responsibilities of the exporters without neglecting the vital interests within their own branch. The watchword of both branches must be in the future, as in the past, "March separately, attack together, for the glory of our industry and our commerce."

FREDERICK NACHOD,
Vice-Consul.

LEIPZIG, *November 16, 1900.*

TARIFF LEGISLATION AND COMMERCIAL TREATIES IN GERMANY.

The winter session of the German Reichstag, which began on Wednesday, November 14, is recognized as the beginning of what will be perhaps the most important legislative campaign that has taken place since the formation of the Empire. Besides the discussion of the policy of the Government in respect to its interests in China, it is expected that there will be introduced sooner or later during the coming year not only a new schedule of import duties, but the correlative and not less important question whether the several commercial treaties with other nations, which will expire by limitation at the close of 1903, shall be reenacted with such modifications as experience may suggest or abandoned at the demand of the extreme protectionists, headed and controlled by the Agrarian party.

That German industries and commerce have been powerfully favored and supported by the influence of these treaties, and that the past eight years have done more than any other period of equal duration to raise Germany to a place in the front rank of manufacturing and commercial nations, are facts which no one ventures to

dispute. The complaint of the Agrarians is that the benefits of this liberal policy have inured wholly to the advantage of the industrial and mercantile classes, while the farmers, left to struggle against increasing competition of food products from countries favored with cheaper and more fertile lands, have been sacrificed to the point of impending ruin. The controversy is one which reaches down to the foundations of German progress and prosperity, and has divided public opinion into two opposing camps, which have entered into the campaign with extraordinary spirit and determination.

An interesting incident of this contest has been the organization during the past week of a powerful national association for the support of the policy of commercial treaties, with all that it involves. This association, entitled "Der Handelsvertrags-Verein," was founded at a meeting held at the Berlin Chamber of Commerce on Sunday last, at which were present three hundred of the foremost manufacturers, merchants, and bankers of Germany. The meeting was opened with an address by Dr. George von Siemens, who declared the purpose of the proposed union to be the maintenance of a fiscal system based upon a continuation of the present commercial treaties and resistance to all measures which oppose that policy.

It was further proposed and agreed that the association should be headed by a permanent committee of not less than thirty members, representing every industrial and commercial interest, the committee having power to increase its membership as circumstances may dictate. The duration of the organization was fixed provisionally at three years, and each member then present signed a compact to pay during that period a fixed annual contribution for the support of the society and the furtherance of its work. The association is to be wholly independent of political affiliations; recruits from all political groups and parties are to be welcomed. The list of charter members of this organization includes many of the ablest and most influential men of this country—men whose prominence is not the accident of birth or inheritance, but whose energy and intelligence have contributed largely to make industrial and commercial Germany what it is to-day. Their organization can not fail to exercise an important influence in the legislative contest which is about to open.

From an outside standpoint, one of the most striking features of the meeting was the clear and definite statement made by one of the speakers of the grounds upon which the Agrarian opposition to the renewal of the commercial treaties is based. It was shown that the wealth of the German people is estimated at 150,000,000,000 marks ($35,700,000,000), of which only 25,000,000,000 marks ($5,950,000,000), or about 16 per cent, represents the value of lands adapted

to the cultivation of cereals, the owners of which are directly interested in the increase of duties on foreign grain. The question is therefore whether, in view of the present enormous development of German manufactures and the increasing difficulty of finding markets for products in face of the powerful competition of certain foreign countries, it will be wise or safe to change the fiscal policy of the Empire and, by abolishing the treaties and increasing the duties on food materials, incur the danger of reprisals and tariff wars in which Germany would be at a fatal disadvantage.

An interesting side light has been thrown upon this question by the award during the past few days of several important foreign contracts for steel and iron to American firms, under circumstances which emphasized the potency of cheap and rapid production in the United States. The large contract for structural material placed by the North German Lloyd Steamship Company in the United States; the sale of 12,000 tons of rails by a Pittsburg firm to the Colonial Ministry of Holland; the contract for 3,400 tons of cast-iron water pipes for Sœrabaya, given to a Philadelphia firm which had underbid by 25 per cent the Friedrich Wilhelm Foundry Company, at Mühlheim, in Westphalia; the large orders placed in Maryland for railway supplies for South Africa; and finally the capture by an American firm of a contract for 8,000 tons of steel rails for a local road in Friesland, where the Krupp Works had hitherto enjoyed a practical monopoly of such supplies—all these incidents have produced a profound impression here and strengthened the spirit of resistance to any governmental policy which may, by increasing the cost of food, weaken the power of Germany to meet the new competition from beyond the sea.

Seldom, if ever, in the legislative history of any nation has a tariff measure been prepared with more thorough, careful, and comprehensive study than the one that will be submitted to the German Parliament. Its preparation has enlisted the long and painstaking labor of expert economists who represent every department and special interest of manufacture, agriculture, finance, and commerce.

The study of this subject and the preparation of statistics and material for the information of the Reichstag began several years ago. Before the treaties whose fate is now to be decided had run half their prescribed span of years, the question was raised, What shall succeed them? A permanent association of business men was formed for the special purpose of acting as a bureau of information for the Government on this complicated subject. Its labors have been arduous and unremitting and have served to bring out and emphasize the conflicting demands of each individual interest, and thereby show how complicated and difficult will be the task

of harmonizing them and formulating a new fiscal policy that, without too rudely sacrificing the agriculturists who had so long been the mainstay of the Government, shall conserve and strengthen the industries and commerce which constitute the strength and prosperity of the Germany of to-day.

FRANK H. MASON,
Consul-General.

BERLIN, *November 19, 1900.*

COMMERCIAL AND INDUSTRIAL CONDITIONS IN GERMANY.

In his annual report for 1900 (to appear in the forthcoming edition of Commercial Relations), Consul-General Mason, of Berlin, submits statistics showing the fluctuations in the receipts of twenty leading staples which form the bulk of German imports from the United States, the comparison being given in units of metric tons (2,204.6 pounds avoirdupois), as follows:

Imports.

Articles.	1897.	1898.	1899.	Gain or loss in 1899.
	Met. tons.	*Met. tons.*	*Met. tons.*	*Met. tons.*
Raw cotton	225,273	285,958	258,066	− 27,892
Raw tobacco and stems	10,726	10,981	13,056	+ 2,075
Hides and skins	6,381	6,239	3,688	− 2,551
Lumber and timber	207,288	271,298	324,585	+ 53,290
Meats (canned, etc.)	27,276	37,214	4,298	− 32,916
Buckwheat	16,008	15,832	7,015	− 8,817
Barley	118,928	37,629	54,927	+ 17,298
Oats	96,009	220,463	94,518	−125,945
Corn	976,034	1,231,685	1,246,507	+ 14,822
Wheat	207,261	528,021	710,317	+182,296
Rye	142,997	248,912	70,494	−178,418
Petroleum, refined	837,659	874,242	831,112	− 43,130
Pig iron	18,034	20,849	29,661	+ 8,812
Pork meats	18,034	20,849	30,324	+ 9,475
Fruits:				
Fresh	10,337	2,686	3,548	+ 862
Dried	17,850	13,275	12,117	− 1,158
Cotton-seed oil	15,548	25,320	16,827	− 8,491
Oil cake, etc	159,483	206,642	278,810	+ 72,168
Bicycles	224	462	189	− 273
Copper, raw	.....	52,473	47,742	− 4,731

Mr. Mason adds:

The small decline in imports of dried fruits was due solely to the short crop and consequent scarcity and high prices in the United States. The fact is, however, that American dried fruits—apples, prunes, apricots, pears, and peaches—are steadily growing in popularity in the German market, and all indications point to a largely increased importation during the present season. The fine, highly

flavored prunes of the Pacific coast are replacing in German consumption the cheap and inferior grades from Bosnia and the high-class but more expensive prunes from southern France.

Especially notable in the above exhibit is the increase in the import of forage grains, and this comparison is still more striking if it is carried backward five or six years when the real strength of this branch of trade began to develop. For instance, the total German import of American corn in 1895 was only 181,848 tons, against the 1,246,507 tons of last year. The whole import of American oats in 1895 was but 1,571 tons, and of oil cake 96,152 tons, against 94,518 tons and 278,810 tons imported in 1899.

It is not to be denied that statistics like these inspire great uneasiness among certain German economists, particularly those of Agrarian tendencies, who insist that in respect to food products, forage grains, and certain other materials Germany is becoming altogether too dependent upon the United States. This sentiment was sharply evinced in the wholesale denunciation by the German press of the recent $20,000,000 loan which was placed by the Imperial Government at New York. It is pointed out that in the decade from 1890 to 1899, the total imports into the United States from Germany were $885,065,402, while the imports of Germany from the United States were valued at $1,085,826,756, leaving a net balance of $200,761,354 against the Empire; and the question is asked, when and where this dependence upon the Republic for cotton, copper, breadstuffs, meats, petroleum, forage grains, and now, money is going to end, or whither it will lead if not checked by higher duties and sharper restrictions. The sting of all such reasoning as this is, of course, drawn when it is remembered how large a part of these imports consisted of the raw materials without which German industries could not exist, and meats and other food products which the working people of Germany thirty years ago knew only by name. The fact that they can and do afford to eat them now in constantly increasing quantities proves simply that Germany has become a prosperous and successful industrial nation. The statistics of the five years from 1895 to 1899 show that, notwithstanding all the efforts of German agriculturists to supply the home demand, 8.1 per cent of the total consumption of rye, 29.6 per cent of wheat, 30 per cent of barley, and 6.2 per cent of oats must be imported from other countries; and it is not apparent that these conditions are likely to be materially changed in future. The population of the German Empire increases about 800,000 souls per annum, and with every effort on the part of the food-producing classes they can do no more than follow far behind this increase, without any immediate prospect of overtaking it. Notwithstanding

this, a movement is now in progress to demand an increase of the import duty on wheat and rye to 8 marks ($1.90) per 100 kilograms (3.66 bushels of wheat and 3.93 bushels of rye). This would be equivalent to a duty of about 52 cents per bushel on the wheat, and if enacted and enforced—as now seems probable—it would seriously affect the food supply of the working classes and drive them back to the sour, hard, black bread of former years.

GENERAL INDUSTRIAL AND FINANCIAL SITUATION.

In the preceding reports of this series, there has been during the past six years little or nothing to record except a steady and rapid development of manufacturing industries and commercial activity throughout the Empire. During the critical period of 1894, 1895, and 1896, when the iron and steel interests of the United States were in a depressed and struggling condition, American visitors who came to examine the coke-making plants in Westphalia and Silesia were surprised to find furnaces and rolling mills generally in active operation, and the cutlery, hardware, and other assimilated industries busy and prosperous. This was due to various causes, which were explained at the time, one of which was the steady and rapid development of shipbuilding, the improvement of the State railways, and the fact that the export trade to South America, Australia, and other new markets was becoming established through the influence of German steamship lines and the enterprise of German bankers and capitalists in making large and judicious investments in foreign fields.

This has gone on steadily, the producing capacity of all leading German industries growing steadily from year to year, until the present limit of judicious expansion has been apparently reached. In several branches of iron and steel manufacture the point of highest prosperity has been passed, production has overtaken the demands of both home and foreign trade, and, in the face of a falling metal market, conservative managers have begun during the past three months to visibly shorten sail. Most of the works are still busy upon orders booked several months ago; but, with the exception of shipbuilding, locomotives, gas engines, and certain forms of electrical machinery, the demand has slackened, and deliveries which a year ago could not be promised under four or five months are now made in as many weeks. The Prussian State Railway Administration has begun an important extension of its facilities, especially in the freight department, which had become superannuated and far behind the present requirements of traffic. It is stated upon official authority that orders have been given to German builders for 780 locomotives, at an aggregate cost of 45,000,000

marks ($10,710,000), which are to be delivered between January, 1901, and April, 1902. Car builders are also supplied with orders which will keep them occupied for many months to come.

Shipbuilding is still as active and prosperous as at any time heretofore. The two great companies at Hamburg and Bremen, which have done so much for the development and extension of the German merchant marine, have gone on increasing the number, size, and speed of their vessels until they have distanced all foreign rivals and are now forced to compete with each other for the speed record of the sea. Four shipyards at Stettin, Kiel, Flensburg, and Bremen have increased their share capital by nearly $2,000,000 during the past eight months, in order to keep pace with their growing business; and the Hamburg-American Steamship Company, which paid 8 per cent dividends last year and has 177 steamers in service, has besides 25 new ones under construction, mainly in England, because the German builders are too busy to undertake them. The North German Lloyd Company has 223 vessels in service, 20 under construction, and from its 20,410,613 marks' net earnings paid last year a 7½ per cent dividend.

The German exhibit at the Paris exposition is conceded on all hands to have been—especially in the departments of machinery, chemicals, and all that relates to the application of science to industry—a triumphant vindication of German methods and a display which alone would establish the right of the Fatherland to a place in the front rank of industrial and commercial nations.

As has been above intimated, there is inevitably a reverse side to the medal, and some of the clouds on the horizon are of a nature to inspire a certain degree of anxiety. In addition to acknowledged overproduction in cement, iron tubing, and various other manufactured products, and the temporary stoppage in exports to China and the South African states, there is the fact that the wide and enormous expansion of industries and commerce has so absorbed German capital that there is now a serious stringency in the money market, which has helped to depress securities of all kinds and embarrass many manufacturers who operate independently of syndicates and combinations. It is well known that German banks finance industrial and commercial enterprises to an extent unknown in any other country, and it is estimated by the Moniteur Industriel that German investments of various kinds in foreign countries now amount to not less than 7,500,000,000 marks ($1,785,000,000), distributed throughout Turkey, Africa, China, Mexico, South America, Canada, and the United States. There are invested in the one hundred and fifty German stock companies which manufacture electrical machinery and equipments more than $200,000,000, or nearly four times the amount of such investments in 1896. To this may be added 450,000,000

marks, or more than $100,000,000, invested in electric tramways, lighting, and power plants during the same period. The average dividends paid by the electric manufacturing companies in 1899 was 9.3 per cent; but nothing could prevail against the downward tendency of industrial investments, and electrical stocks have shared in the general drop which has taken place during the past six months. As a measure of this decline, there is herewith given the market values of the stocks of several leading companies on the 1st of January, June, and October, 1900, respectively:

Companies.	January 1.	June 1.	October 1.
Siemens & Halske	178	171	159
Schuckert & Co	227.6	213.4	185.4
Helios	167.75	155.6	127
Union Electrical Company	171.3	137.5	134
Berlin Electrical Works	216.5	204.8	192.5

These are all companies of the highest responsibility, admirably managed, and stocked with orders for months to come. The same decline in stock values is seen even in the chemical industry, in which the Germans are easily preeminent.

For instance, a company in one of the North German seaports which makes chemical fertilizers and pays this year as well as last a 12 per cent dividend has seen its stock drop from 166 to 134 since May 1, for no other apparent reason than tightness in the money market and the desire of timid stockholders to realize on their shares.

German national 3 per cents, with the whole credit and strength of the Imperial Government behind them, are quoted to-day at 85.4, while French 3 per cent rentes are 101 and English 2¾ consols a fraction higher.

It is beyond the scope and purpose of this report to undertake any discussion as to what or how much all this may mean beyond the obvious fact that, notwithstanding her progress and prosperity during the last thirty years, Germany is still poor in accumulated wealth in comparison with France and England, and that her available capital is so wholly invested and actively employed that all share values—even the best—are kept by pressure of the money market inordinately low. Writers in other countries, especially England, have painted the situation in somber colors, inveighed against the zeal of German banks in financing industrial and foreign enterprises, and predicted stormy weather for German metal industries in face of the increased cost of fuel and the overshadowing competition of the United States. While these general aspects of the situation are clearly recognized in Germany, there is no outward symptom of trepidation or panic, and business men of all classes

face the future with apparent confidence. While many are disposed to admit that the creative energy of the past few years has pushed production beyond the present capacity of home and foreign markets, they insist that this activity is the result of much deeper and more permanent influences than those which determine a merely temporary industrial revival, and that their present position, attained through advanced technical and commercial education, industry, frugal living, and the skillful application of science to manufacturing processes, can not be undermined by any mere stringency of money or other temporary cause. Their people have been trained for generations to hard work and plain living, and, while new and wider markets are urgently necessary, they have acquired the capacity of cheap manufacture, the ships, and the national force as a world power to secure and retain them.

Even the strained condition of the fuel market is pointed to as a normal symptom of industrial health and vigor. Coal is scarce and dear in Germany, not because the native deposits are approaching exhaustion nor because less is being mined than hitherto, but because more is used than ever before. The German output of coal in 1899 was 101,621,866 metric tons,* against 96,309,652 tons mined during the preceding year, and the output of the first nine months of 1900 has far surpassed the record of any other corresponding period. Here, as elsewhere, the substitution of electric tramways for horse power, steam vessels for sail, the heating of buildings with coal and coke instead of wood, the increased traffic of railways, and the extension of every branch of manufacture that consumes fuel or uses power have combined to overdraw the carefully regulated product of domestic mines, while high prices and short supply in England and Austria have curtailed the supply from those sources. Whether any important part of this deficit can be filled in the near future by American coal is, as has been repeatedly stated in consular reports, a question of ocean transportation, for which the future must provide. Berlin, with water transportation from Hamburg during eight months of the year at 75 to 80 cents per ton, is to-day paying $6.25 per ton for ordinary Silesian steam coal. Briquettes and other kinds of household fuel command double the prices of fifteen months ago, with the prospect of still further advance on the setting in of winter.

AGRICULTURE AND AGRARIAN LEGISLATION.

The condition of German agriculture is still unsatisfactory and presents a complicated and difficult problem for those who seek to mitigate its difficulties by legislation. The total wheat crop of 1900

*1 metric ton=2,204.6 pounds.

is reckoned at 122,034,000 bushels, against 138,210,600 bushels in 1899; so that, unless the purchasing power of the people is restricted by lower wages or lack of employment, there will be needed about 14,000,000 hectoliters (38,732,000 bushels) of imported wheat to supply the deficit until after the harvest of another year.

In a commercial sense, the most important agricultural product of Germany is beet sugar. The business year is reckoned from August 1 to July 31, so that the statistics of the past year's crop are now available and show the entire product of Germany to have been 1,576,673 tons of raw and 1,212,271 tons of refined sugar. Reckoning the refined at its due equivalent in raw, the total raw-sugar crop of the past year was 1,791,252 metric tons, an increase of 68,823 tons over the product of the preceding year. The yield was exceptionally favorable, being at the rate of 1 ton of sugar for 6.96 tons of beets, against 7.05 tons in 1898–99, 7.43 tons in 1897–98, and 7.53 tons in 1896–97. But, notwithstanding this most favorable yield, there has been a falling off in the exports of German sugar, the decline being from 1,186,962 tons in 1896–97 to 982,869 tons in 1897–98, 956,214 tons in 1898–99, and 924,562 tons in 1899–1900. There is thus a net loss of 31,700 tons in comparison with the exports of the last preceding year, and nearly 100,000 tons since 1896. The exports to the nine principal countries have fluctuated as follows during the past three years:

Country.	1899–1900.	1898–99.	1897–98.
	Tons.	*Tons.*	*Tons.*
Great Britain	521,981	607,595	628,367
United States	218,540	188,852	142,434
British North America	40,500	51,474	38,474
Hamburg (free port)	27,541	9,105	43,202
Japan	20,392	16,074	31,326
Norway	20,233	17,681	17,328
Switzerland	12,654	12,127	12,925
Denmark	11,845	13,004	7,358
Portugal	8,262	7,778	6,765

So that, while the export to the United States gained 29,688 tons, that to Great Britain fell off 85,614 tons, or 14.1 per cent, and that to Canada about 25 per cent. On the whole, the outlook for the German sugar industry can not be considered brilliant. Under the stimulus of bounties and the incomparable technical skill of German scientists, both the cultivation of beets and the manufacture of sugar have been improved and perfected to the highest possible efficiency. But such a bounty system could naturally not make sugar cheap in Germany and thereby greatly increase the per capita rate of home consumption, and meanwhile every year adds to the sugar-cane-growing area of Queensland, Hawaii, Cuba, Porto Rico,

and the Philippines, to say nothing of Louisiana and the beet-sugar culture of the United States.

Without entering into further detail, it will suffice to say that, for reasons which have been often stated, German husbandry is no longer profitable; and the agriculturists and landowners are now united in a powerful and aggressive political party and will endeavor to obtain through protective legislation a larger share of the benefits which, as they claim, have fallen in recent times wholly to the share of the industrial and mercantile classes. The law of 1896 forbidding bourse speculations in grain, the meat-inspection act—one clause of which, excluding canned meats and sausages, has just gone into effect—and the regulations concerning inspections of fruit have been adopted in deference to Agrarian influences, which will seek to prevent the reenactment of the liberal commercial treaties of the Caprivi period and to secure higher import duties on grains and other food stuffs. Against the Agrarian demands there are leagued the industrial and commercial classes, who know that in order to maintain her place as an exporting nation Germany must have cheap and abundant food and raw materials of many kinds which can not be produced in sufficient quantities at home. Between these two opposing interests the pending contest over the new tariff schedules will be waged, and no foreign country—not even Great Britain or Russia—will be more directly interested in the result than the United States. The time is ripe for a calm, deliberate, and scientific revision of the present obsolete and imperfect treaties between the Republic and the Empire—a broad, intelligent adaptation of their relations in all that pertains to reciprocal trade, naturalized citizenship, and other vexed and irritating questions, to the new and vastly enlarged positions which both countries have won since the present treaties were framed.

Here, as elsewhere, the United States is frankly recognized as Germany's most richly endowed, most aggressive, and most formidable rival. On the other hand, the Empire is, after Great Britain, our best customer, and anything which checks the prosperity of her people will diminish to that extent their ability to maintain the reciprocal trade which is now so heavily in favor of the United States. In the commercial competition between the two countries, all natural advantages—cheap and superior ores, coal, lumber, cotton, and food materials—are and will remain strongly on the side of our country. To these, Germany can oppose her higher technical and mercantile education, cheaper and more tractable labor, and a merchant marine capable of carrying her products to every market on the globe. Rivals thus endowed and equipped can surely afford to sink all petty jealousies and resentments and meet each other in a spirit of manly emulation and mutual respect.

NEW GERMAN STEAMSHIP LINE TO SOUTH AMERICA.

The Hamburg-American Line has recently established steamship communication with the North Brazilian ports of Para and Manaos, a steamer being advertised to leave Hamburg on the 15th of each month. The first vessel of the new line (the *Canadia*) left Hamburg on July 14 and returned via Baltimore after a favorable voyage of seventy-six days. The result of this trial trip was satisfactory, and the financial success of the venture seems to be assured.

On the outward voyage, the ship touched at Havre, Oporto, and Lisbon. The freight from Germany consisted chiefly of manufactures and cement. That from Portugal consisted of vegetables and wine.

No obstacle to navigation was encountered during the entire trip. The unloading at Manaos was effected without difficulty, there being no need, as is often the case at other ports, to unload the cargo into lighters, where it must remain from twenty to thirty days, owing to the overcrowding of custom-houses.

Heretofore, the trade of the Amazon has been in the hands of two English companies, which, it is alleged, have not used their monopoly in such a way as to win popularity.

Officials and merchants (especially German merchants, of whom there are already not less than thirty-six at Manaos) express their satisfaction at the action of the Hamburg company in sending its ships to them.

The return freight taken on board the *Canadia* at Manaos consisted of piassava and hides, the cargo being completed at Baltimore.

In his official speech of welcome the governor at Manaos expressed the hope that rubber (the principal product of that region) would soon find a new market at Hamburg, and that then the German line would secure most of the freight. Rubber does not stand a long voyage and can be sent only by fast steamers directly to the places where it is to be used (heretofore, New York, Liverpool, and Havre).

Since the *Canadia's* trip, the *Alemania*, *Valesia*, and *Croatia* have been sent out in August, September, and October, respectively. For the present, it is intended that the return voyages shall be made via the West Indies.

A regular service between Hamburg and northern Brazil is accordingly already in operation. Here, as everywhere, German steamship companies are acting as the pioneers of German trade by supplying direct and regular channels of communication. If Ger-

man merchants prove energetic and enterprising in promptly understanding and utilizing the advantages thus offered them, Germany's commercial and political influence in Brazil will soon be largely increased, and one of the future's richest markets will be lost, or partially lost, to United States trade.

MAX J. BAEHR,
Consul.

MAGDEBURG, *October 26, 1900.*

CONDITIONS IN THE GERMAN IRON AND STEEL MARKET.

For the last seven years the German iron industry has been steadily growing, the yearly increase in production during the last three years amounting to a trifle over 500,000 tons. During this period, owing to the ever-increasing demand, prices have also steadily risen, so that an exceptional period of prosperity was experienced. The increase in prices began to make itself especially felt in the year 1898, continued steadily during 1899, and reached its climax in May and June of the present year, when, owing partly to the enormous increase in the price of fuel and also to the tendency of buyers, who regarded any prospect of a fall in prices as out of the question, to insure their supplies for the whole year, prices reached their highest point. In the early part of the year, the United States and England were enabled, owing to their home markets being quieter, to supply the Continent at cheaper rates; but their markets and freights followed the general upward tendency. With the outbreak of the war in China, and also influenced by the protracted nature of the war in Africa, trade in general received a decided check towards the latter half of July, and since then the iron and steel market, in common with nearly everything else, has been falling steadily. At the present moment, the state of the Rhenish Westphalian and Siegerland markets is very unsatisfactory, makers in many cases forcing their customers to take delivery of the manufactured iron and steel they contracted for months ago, which tends to precipitate matters and force even firms that were thought to be quite sound to consider their position. The increase in the number of existing works has for the moment caused considerable overproduction as compared with the demand, and prices have still a downward tendency.

The table below gives the ruling prices in May, June, and the early part of July compared with present prices, which latter, how-

ever, vary considerably from day to day, and can only be considered approximate:

Description.	May, June, etc.		October and November.	
	Marks.		*Marks.*	
Fine sheet	210 to 220	$49.98 to $52.36	165	$39.27
Coarse sheet	235 to 245	55.93 to 58.31	210 to 220	$49.38 to 52.36
Siemens	215	51.17	180	42.84
Bars	175 to 185	41.65 to 44.03	165	39.27
Girders	*240	*57.12	*240	*57.12
Hematite	102½ to 105	24.40 to 24.99	95	20.71
Foundry iron	87 to 97	20.71 to 23.08	83 to 88	19.75 to 20.94
English	87 to 95	20.71 to 22.61	85	20.23

*Plus freight.

The above table will suffice to show the tremendous change which has taken place since July. Even in the Upper Silesian market, which, in consequence of good export orders in hand, has remained fairly firm, an unsettled tendency is noticeable.

The high freight rates have been very prejudicial to the import of American material, but with the enormous increase of tonnage recently reported, freights have dropped considerably; and, as it seems likely that for some time the tonnage will be in excess of requirements, American exporters should have a good chance of competing successfully in the European markets, especially as the price of fuel still remains very high and at present shows no signs of falling to any appreciable extent.

Competition for all sorts of iron and steel is very keen, and the continual shrinkage in home and foreign contracts leaves larger quantities to be disposed of at the works than is at all desirable. At a meeting of the hoop-mill convention, which took place a short time ago, it was agreed to maintain the former price of 195 marks ($46.41) per ton; but offers are known to have been made by dealers at prices considerably below the list quotation. Rumors are current that, owing to an increase in the foreign demand, a fair amount of fresh work is likely to soon come to the rolling mills. The tube convention has resolved on a change of quotations, raising those of the best sorts, for which American competition need not be feared, while the prices for heavier sorts have been reduced. The South German rolling-mill convention has also reduced quotations and brought them on a level with those of the other German syndicates.

The depression has made itself most felt in the bolt, nut, rivet, and kindred trades, prices being at the present moment 60 per cent lower than in the summer and still falling, and makers being ready to accept orders at almost any price.

The large engineering and similar works are at present fairly well employed, but many smaller ones feel the depression and have to discharge some of their men; while the larger works all note a decrease of orders coming in, pointing to a slack time as soon as the work in hand is completed.

In conclusion, it may be remarked that the outlook at the present moment is not good, but it is a more or less natural outcome of overproduction and the generally unsettled state of politics the world over. Should the wars in Africa and China be brought to a speedy and satisfactory termination, it is probable that there will be a general improvement; and as long as freights remain low, there is an excellent chance for American iron and steel to obtain a good footing in the German market, although exporters will have to reckon with a growing tendency in this country to crush American competition at any cost, as it is now clearly realized that our country is Germany's most formidable rival for commercial supremacy.

CHAS. E. BARNES,
Consul.

COLOGNE, *November 13, 1900.*

BUSINESS DEPRESSION IN GERMANY.

A late number of the Brunswick Landeszeitung says that there is a decrease of 37.4 per cent in building enterprises in Germany, as compared with the summer of 1899; of 58 per cent in railroad projects; of 63.43 per cent in construction of electrical and street railroads; of 32.33 per cent in projected electrical plants for lighting, etc.

The number of projected gas works is almost a third less, but, in view of size and percentage of production, there is little difference. In other spheres of activity, such as mining and smelting, work in stone and earth (fertilizing salts, etc.), metal manufacture, production of chemicals and textiles, breweries, and water works, the statistics show a difference of 27.2 per cent.

There have been quite a number of failures in all branches of business during the last seven months, and in my own consular district two of the oldest and best established glove manufacturers have become bankrupt. This depression is a natural reaction after so much prosperity. Germany was never so flourishing as during the year 1899. New business enterprises of all kinds were projected, and old enterprises increased their plants; future profits were discounted; new issues of securities were made to cover expected

profits. The depression in the iron and steel trade in April last called the attention of the public to the actual condition of affairs, and this led to the general taking of stock. A judicious restriction of the spirit of enterprise followed, which averted an otherwise inevitable panic.

TALBOT J. ALBERT,
Consul.

BRUNSWICK, *November 23, 1900.*

GERMAN VS. UNITED STATES CONSULAR SYSTEM.

In his interesting book on the commercial treaties of 1903 (which lately was published by the German bureau for the preparation of trade treaties), Dr. Vosberg-Rekow, the well-known economist, says about United States consuls:

The Americans have acted judiciously in establishing a system which is of the greatest advantage to themselves, but costly and inconvenient to their competitors. In all countries with which it has trade relations, the United States has stationed consuls and consular agents. Every shipment of goods to a United States port must pass through the hands of these officials, and the amount, value, place of origin, market price ruling in the country of production, method of production, etc., are noted. The consuls thus dive deeply into the economic condition of their districts, and obtain information the result of which is discernible in the steadily increasing exportations of their home country.

Is this system worthy of our imitation?

It has been held that this method is practicable for the United States, because its foreign trade is concentrated in a few ports, while Germany has innumerable inland customs offices. However, if our customs bureaus receive clear instructions, they will be able to transact the business satisfactorily. Besides, I believe, this system will bring additional advantages. Our consulates, which should be greatly multiplied, would without doubt be easily maintained from the fees to be paid by the foreign shippers.

The consul, the vice-consul, and the consular agent should be professional officials, and not merchants whose interests lie with their business, as is now the case with our honorary or merchant consuls.

Our consuls should be charged to study minutely and extensively the conditions of the export trade to their country and the working methods of the manufactories and business houses engaged in these exports. To afford them the opportunity for this work, we must prescribe requisite regulations for the importations of such foreign products.

SIMON W. HANAUER,
Vice-Consul-General.

FRANKFORT, *October 22, 1900.*

PROPOSED GERMAN DUTY ON WHEAT.

The Agrarian party, after having succeeded during the last session of the Reichstag in enacting a law prohibiting, in effect, the importation of American corned beef and canned meats and sausages, is now using its powerful political influence to bring about the enactment of a law that will vastly increase the import duties on all grains entering the German Empire, notably on wheat.

In this connection, it may be of interest to note the following table, showing the duties imposed by various nations on the two leading grains for breadstuffs:

Country.	Duty per bushel.	
	Wheat.	Rye.
	Cents.	*Cents.*
Portugal	58.3	46.6
Sweden	27	27
Argentine Republic	.....	25.1
Italy	39.1	23.6
Spain	55	23
Germany	22.6	22.6
Hungary	19.2	19.4
France	36.7	15.7
Greece	16.8	12.3
United States	25	10
Canada	21.4	10
Turkey	7.5	5

At present, the chief countries dependent on others for a large part of their wheat supplies are Germany, France, England, Austria, Italy, Spain, Switzerland, and Belgium. The leading wheat-exporting countries are Russia, Hungary, East Indies, Balkan States, United States, Canada, Argentine Republic, and Australia.

The aim of the Agrarians is to make Germany entirely independent of all countries for its breadstuffs and food supplies. However, it is impossible to understand how a duty of, say, 44 cents on every bushel of imported wheat, as is now proposed to the Reichstag, can increase the crops of wheat and other cereals in this country or decrease the appetite of its people. Farming, diversified and intensified, is done in Germany upon more improved and scientific methods than probably anywhere else in the world. Though the Germans use less machinery in garnering and removing their crops than we do, they apply more chemistry in the treatment of their soil, and use almost every inch of ground available for agricultural purposes. More commercial fertilizers are imported into this country and manufactured here, and more attention is paid to "soil inocula-

tion" in order to increase fertility, than in any other country. And yet, with all that science and money and toil can do in raising grain, Germany is obliged to import from other countries about one-eighth of her breadstuffs. One-eighth is a rather small fraction and does not look at all formidable, but when it is borne in mind that in 1899 Germany had to import 50,371,436 bushels of wheat, for which she paid $42,935,200, and 22,097,178 bushels of rye, which cost her $15,446,200, the question at once assumes gigantic proportions. For the two items of wheat and rye, this nation paid to other nations the handsome sum of $58,381,400, and this vast sum of money the Agrarians claim will be retained in Germany if a higher duty be imposed on wheat and other grains.

It is proposed to add to the acreage of this country by putting under cultivation all the barren, waste places now occupied by moors and heaths and swamps. It is claimed that ample protection will bring better prices for home-grown wheat, which will encourage the German farmer to grow less sugar beet and more grain. But even should Germany be as successful in increasing her production of wheat and rye as the most sanguine Agrarians expect, it would be impossible for any length of time to supply the home consumption. With the natural increase of the population of Germany, the demand for and the consumption of breadstuffs are continually growing. Each year brings to this country, on the average, 600,000 fresh mouths clamoring for food. So, after all, it is difficult to see how the proposed national legislation can have any other effect, in the long run, than to enhance the price of the daily bread so needful to every man, woman, and child in this country.

At this writing, there seems to be little doubt that the proposed law will be passed by the German Reichstag. This will seriously affect the interests of the American farmer, for a large part of the importation of wheat is American grown. A duty of 40 to 50 cents on every bushel of wheat can not fail to be well-nigh prohibitive, and the consequence will be more limited markets, fiercer competition, and lower prices to the producers.

HENRY W. DIEDERICH,

BREMEN, *November 26, 1900.* *Consul.*

TRAFFIC ON GERMAN CANALS.

Consul Hughes, of Coburg, under date of October 30, 1900, sends the following:

The Kaiser Wilhelm Canal has been used in the fiscal year 1899–1900 by 26,279 toll-paying vessels with a total of 3,488,767 tons

(register) net, being 463 vessels and 370,927 tons more than last year. The above number includes 11,277 steamships of 2,748,918 tons, 13,248 sailing vessels of 492,121 tons, and 1,754 barges and scows of 247,728 tons. Eighty-five and eight one-hundredths per cent of all the vessels, with 65.11 per cent of the total tonnage, were under the German flag. The following shows the nationalities of other boats:

Foreign flags.	1899–1900.	1898–99.
	Per cent.	*Per cent.*
British	10.33	9.71
Danish	7.93	6.88
Swedish	6.71	5.27
Russian	3.06	2.29
Norwegian	2.96	3.59
Dutch	2.95	3.41
Belgian	0.40	0.37
French	0.07	0.03
Other flags	0.48	0.24

On October 23, Mr. Hughes states that when the Elbe-Trave Canal was opened last June it was predicted that it would not pay expenses, but the traffic has exceeded the expectations of the most sanguine, and the ancient city of Lübeck must provide improved landing piers to accommodate the increased business brought about by the success of the canal. The consul adds:

The great Rhine-Elbe Canal scheme is buried for the time, owing to the opposition of the Agrarians; but the plan is not dead. Meanwhile, South Germany will have a chance of agitating for the realization of an old project—the Danube-Main Canal. There is canal connection at the present time, but of a very crude kind.

OPENING FOR FLAX IN GERMANY.

Since the date of my last report,* prices of flax yarn in Europe have advanced 10 or 12 per cent because of the scarcity of raw flax. A number of mills are closed; others work half time or operate only some of their spindles. All the mills could operate at full time if they had raw material in sufficient quantities and at reasonable prices.

Russian flax will come into the German and Austrian markets in January, 1901. Should it be possible to offer American flax in the near future, our growers might find a steady market for their product; but it is evident that it should be offered as soon as possible.

*See ADVANCE SHEETS No. 889 (November 17, 1900).

The German and Austrian flax spinners will meet at Breslau, Germany, December 11, 1900, and at Trautenau, Bohemia, December 13, 1900, together with the Belgian and Russian dealers in raw flax. This would be a splendid opportunity to offer American flax samples. A German business man engaged in the flax business informs me that he will gladly show American samples of raw flax at these meetings.

WILLIAM K. HERZOG,

ZITTAU, *November 9, 1900.* *Consul.*

GERMAN BICYCLE INDUSTRY.

The following interesting description of the condition of the bicycle industry in Germany is taken from the Internationale Volkswirt, published in Berlin:

In the downfall which now affects all industrial values, the shares of the bicycle companies have suffered an exceptional shrinkage.

The Berlin quotations report the following decreases in values:

Company.	Capital stock.	Subscription price.	Highest quotation.	Quotation a year ago.	Quotation on Sept. 25, 1900.
	Marks.				
Hengstenberg & Co	1,250,000	146	195	110	76
Fahrzeugfabrik Eisenach	3,700,000	175	258	206	131
Kronprinz	1,400,000	230	240	230	160
Stoewer, Stettin	2,500,000	150	240	141	93
Hercules, Nuremberg	1,000,000	185	190	151	124
Victoria-Fahrrad	1,600,000	160	259	93	54
Weyersberg Kirschbaum	2,500,000	165	204	112	65

From this table, it is apparent that the houses which issued the stock established a nominal par value of 13,500,000 marks ($3,213,000), and demanded not less than 23,803,000 marks ($5,665,114), or about 170 per cent, for the stocks. Speculation drove the shares to such a height that they represented a value of 30,500,000 marks ($7,259,000). In an interval of less than a year, a depreciation of 2,500,000 marks ($595,000) has taken place as compared with the price of issue, and of 9,500,000 marks ($2,261,000) as compared with the maximum course on the exchange; so that now the original subscribers have suffered a loss of 10,000,000 marks ($2,380,000) and the purchasers at the highest course a loss of 20,000,000 marks ($4,760,000). The shares of the Victoria Bicycle Works, at Nuremberg, fell the lowest. This company was founded at the end of November, 1895, with a capital of 1,250,000 marks ($297,500), and immediately the subscription price rose 160 per cent. In 1895–96, there were distributed dividends of 15 and 17 per cent. At the end of July, 1897, new stock to the amount of 350,000 marks ($83,300) was created and offered to the old shareholders at 190 per cent. In 1897–98, the dividend was reduced to 10 per cent. The year 1898–99 closed with a loss of 90,000 marks ($21,420), and the present business year will close with a greater loss. Out of the above table, it is not only apparent that 159 per cent has been lost, but that the capital has been reduced one-half.

What is true of the bicycle manufacturers in Berlin is also true of the establishments in the provinces and of private enterprises. The industry suffers from enormous overproduction and an overstocked home market, with few opportunities for export, unusual expenses for display (such as advertising, bicycle tracks, and racing establishments), and tremendous commissions.

In my consular district, the retail trade this year has been as unfavorable as last. While in 1897 the situation was very good and the prices well maintained (with an average price of 300 marks, or $71.40, for a wheel), in the beginning of 1898 the overproduction, especially from America, made itself felt, and the prices yielded considerably, so that the average cost of a wheel was reduced to 225 marks ($53.50). The following year (1899) the best factories found themselves compelled to make a cheap wheel, which costs 150 marks ($35.70), and this has continued during the present season. However, as a number of factories have gone into liquidation or limited their output, and some have undertaken the manufacture of other kinds of machines, the situation has improved. Indications of a healthier condition in trade may be found in the fact that the larger manufactories have raised the prices for their cheaper products, with a prospect for a further advance.

The chainless wheel is quite popular here. I am told that the American chainless cycle might find a market here next season if it can be delivered to the dealer so that he can sell it for $75 as the highest price for the best article manufactured. Mr. August Bonewald, one of the principal dealers in bicyles in Brunswick, is prepared to represent American factories.

TALBOT J. ALBERT,

BRUNSWICK, *November 9, 1900.* *Consul.*

OCHER IN GERMANY.

Consul-General Mason writes from Berlin, November 9, 1900, that he has received a sample of crude ocher from Texas, which he requested in his report published in ADVANCE SHEETS No. 806, August 13 (CONSULAR REPORTS No. 241, October, 1900). Mr. Mason adds:

This sample I caused to be divided and distributed among several of the leading consumers of yellow ocher in Germany, who, after examination, report unanimously that the tint and quality of the ocher are alike excellent, but that it should be prepared for market by being first washed free from sand and other impurities, then dried, pulverized, and put up in wooden casks. In this condition it would meet with a ready and extensive sale in Germany, where its wholesale value would range from 80s. to 90s. (approximately,

$19.44 to $21.87) per metric ton (2,204.6 pounds), including casks, c. i. f. Hamburg.

The process of washing ocher is simple and well known, and therefore requires no explanation. As above indicated, it will be necessary, in order to introduce this new product into this country, that the exporters shall provide for its transportation to a German port—preferably Hamburg or Bremen—and give a definite price free on board at one or other of those ports. It is impossible for importers in this country to ascertain freights or provide charters from a port on the Gulf of Mexico to Germany. That belongs to the exporter, whose product will in the present case have to compete with French ocher, which has for many years controlled the market in Germany.

NEW GERMAN BAKERY REGULATIONS.

Vice-Consul Murphy, of Magdeburg, November 2, 1900, forwards the following translation of an article appearing in the Magdeburg Zeitung of even date:

The Imperial Ministry of the Interior in Berlin is now preparing new regulations having for their object the improvement of sanitary conditions in bread and cake bakeries, and it is reported that the following rules will be established:

In the future, the floor of a bakery must not be deeper than half a meter (20 inches) below the surface of the ground; the baking rooms must be 3 meters (10 feet) high and must be provided with windows capable of supplying all parts of such rooms with air and light. In bakeries where regularly more than two assistants and apprentices are employed, separate rooms must be provided for the preparation and the baking of the bread. The number of persons employed in each room must be so regulated that at least 15 cubic meters (530 cubic feet) of air is available for each person. The temperature in the working rooms must not exceed 35° C. (95° F.), and there must be connected therewith heated dressing and washing rooms which the employees can reach without exposing themselves to drafts. In cases where these requirements can not be complied with without rebuilding during the first ten years, nothing will be required beyond the correction of serious evils which can be effected without much expense.

The opinions of bakers in regard to the proposed regulations are now receiving consideration.

PRECAUTIONS AGAINST TUBERCULOSIS IN GERMANY.

The Department of the Interior of this Empire has just given out the following instructions:

(1) The professional women who lay out the dead must report at once in writing to the police authorities if said person died of tuberculosis of the lungs or tuberculosis of the larynx.

Should the deceased have been treated shortly before his death by a doctor, the doctor has to state the cause of death on the death notice at the request of the laying-out woman. This notice, with all the facts, must be handed in to the police before the person is buried.

(2) Doctors must under all circumstances where they have patients with lung or larynx tuberculosis give a written notice to the police. Should the doctors consider that the sick person endangers other persons, they must give written notice to the police.

(3) Every case of lung or larynx tuberculosis in private institutions for the sick, orphan asylums, poorhouses, workhouses, hotels, and lodging houses of all kinds must be reported by the attending physician to the police. Should there be no physician in attendance, the owner, keeper, or person in charge of the above-named institutions must report the same to the police within three days after the same has come to his notice.

(4) The police are compelled, as soon as they are notified of the death of a person suffering from lung or larynx tuberculosis, to have the room and articles belonging to said person disinfected as soon as the body is transferred to the house in the cemetery where it must lie twenty-four hours before being buried. In case of persons suffering from lung or larynx tuberculosis, the room and effects of said person must be disinfected as soon as he is transferred to another place. In carrying out the disinfection, any recommendations of the physicians should be observed. It is recommended that the police in disinfecting proceed under the direction of the district physician. The cost of disinfection is to be paid out of the town or city treasury in case the person who has died or is suffering from lung or larynx tuberculosis is too poor to pay the same. The notices of such cases or copies of the same must be sent as soon as possible by the police to the district physician; also all facts or remarks relating to the same.

(5) The police, in the sense of this ordinance, are the city councilors in cities with revised municipal regulations; in smaller cities, the mayors; in villages, the magistrates; in manors, the lord of the manor. In case the death or sickness takes place in the family of the lord of the manor, the district superintendent acts as police.

(6) All necessary formulas for the reporting of such cases can be had free of charge at the office of the district physician.

(7) Any person disobeying the regulations cited in paragraphs 1, 2, and 3 shall be subject to a fine of 150 marks ($35.70) or imprisonment up to six weeks.

J. F. MONAGHAN,

CHEMNITZ, *November 1, 1900.* *Consul.*

MEDICAL DEGREES IN GERMANY.

Consul Hughes sends from Coburg, November 5, 1900, translation of the rules for conferring the degree of doctor of medicine which took effect October 1, as follows:

The degree of doctor of medicine can be conferred only after a thesis has been published and a verbal examination undergone. A "promotio in absentia" will not be allowed under any circumstances. By his thesis, the candidate must prove that he is able to work independently on scientific lines. The thesis must usually be written in German, though the use of another language may be allowed by the

faculty. A biography of the candidate must be appended. The verbal examination consists either of a simple questioning or of an "Examen rigorosum." German subjects can not receive the degree before having obtained permission from the Government to practice as a physician within the Empire.

By a unanimous vote of the faculty and with the permission of the supervising board, deviations from this rule may be granted in particular cases, in which the candidate can not, for weighty reasons, be expected to comply with them. Foreigners who have received the Government permission to practice medicine within the German Empire are subject to the same regulations regarding their promotion to the degree of doctor of medicine as those laid down for German subjects. Foreigners who do not possess the permit for the German Empire and who wish to be promoted should lay before the faculty proofs of the following facts:

(1) That they have had the schooling required in their own country for passing the examination and receiving the degree. If in their own country fixed rules with regard to this matter do not exist, they will have to show certificates from home in which proof is given that their schooling is equal to that required for obtaining the matriculation certificate at a German "Realgymnasium."

(2) That they have passed through—

(*a*) Studies before a regularly organized medical faculty for as many semesters as are required in Germany for admittance to the regular medical examinations.

(*b*) That at least one of those semesters has been spent at the German university at which they wish to receive their degree.

This latter rule may be suspended if the candidate be well known to the faculty. The printed thesis, which must be produced before obtaining permission to appear for the degree examination, may, at the faculty's discretion, be replaced by a scientific work of the candidate which has already been printed and published.

COMMERCIAL EDUCATION IN SAXONY.

Nowhere in the world does commercial and technical education hold such a prominent place as in Germany, and of all the States which compose this Empire, Saxony takes the lead in this direction. This little Kingdom alone has about fifty Handelsschulen, or commercial schools. These schools are in the first instance organized by the Kaufmännischen Vereine, or merchant unions, which exist in every little town in the country. The State exercises a supervising influence over each school. An inspector appointed by the Government visits the schools periodically. The merchant union supports the school; but if there is any deficit at the end of the year, this is made good by the State. The buildings, together with light and heat, are furnished by the town authorities. In many cities of Saxony, handsome buildings have been erected for the purpose of commercial schools alone.

The average salary of the director and teachers depends upon their age and upon the size of the town. A director in a large city will get from $1,000 to $1,500. In the smaller cities, however, the salaries range from $600 to $800 per annum. All these teachers have been prepared for their work by completing either what we term a

classical education or some thorough course without the classics, where more attention is paid to modern languages and business methods. It is the general belief that the latter course secures greater practical results in the schools.

Although the State regards these commercial schools with a certain benevolence, it has thus far made no solid provision for the teachers. In every common village school throughout the German Empire, the teachers know just what they have to expect. There is a staple system of promotion, together with a pension after so many years of service. This is not the case with teachers in the commercial schools, and this fact does much to deter the healthy development of the schools, inasmuch as it prevents many able teachers from entering them. However, teachers in the commercial schools of Saxony are pensioned after years of service, while in Prussia no pensions are granted.

The students who attend these schools come from families of the middle class. They are apprenticed to merchants during their whole attendance at school. Their ages vary from fifteen to eighteen. The law governing the relations between master and apprentice is very strict, and while the pupils are in attendance at school the director takes the place of the master. A number of commercial schools in Saxony takes only students who devote their whole time to attendance; but the majority have apprentices who spend half the time in some business house. The latter plan has been found to be conducive to better results, owing to the opportunity of combining theory with practice.

There is some complaint made on account of the disposition of many merchants to employ clerks who have not completed the full course of two years. There is no doubt that the merchants could greatly assist these schools if they insisted on hiring only young men who had certificates or diplomas from commercial schools.

For a small city, the commercial school of Eibenstock is a model of its kind. It occupies spacious rooms in a large industrial school building and has a director and several teachers. As it is typical of all the other commercial schools in Saxony, I give the scheduled course in detail:

FORENOON.

Monday.—Calculation, bookkeeping, French, English.

Tuesday.—English, typewriting, French, calculation, commercial correspondence.

Wednesday.—Stenography, calculation, bookkeeping, commercial correspondence.

Thursday.—English, French, calculation.

Friday.—Geography, correspondence, French, English.

Saturday.—English, calculation, French.

AFTERNOON.

Monday.—German, French.
Tuesday.—Geography, calculation.
Thursday.—Writing, French.
Friday.—German, commercial correspondence.

This plan speaks for itself. Noticeable, however, is the time devoted to English and French. Through the courtesy of the director and board of trustees, I was permitted to attend the exercises for several days. It is astonishing with what rapidity and precision the young students dash off sentences in English and French. During the second year, the hours devoted to these languages are taken up entirely with conversation and readings, and not a word of German is heard. During the hours devoted to calculation, the currency, together with the measures and weights, of every country in the world is taught, and the students are compelled to make rapid mental calculations in them all. Outside of school hours, the apprentice is kept busy looking after the English and French correspondence of his chief and in learning that particular trade or business of the house to which he is apprenticed. After business hours and in the evenings, he must prepare for the next day's school.

During the winter, the director of the Eibenstock commercial school delivers to his students a series of six lectures, to which the public is invited. These lectures deal entirely with questions relating to trade and the development of commerce. At each one of these meetings, a student must prepare and deliver a short talk on some given topic.

In 1898, a commercial university was established in Leipzig. Only those are eligible to entrance who have completed the gymnasium course or have passed the examination which admits to the one-year conscription service in the army. There is an attempt at present to make the diploma or certificate of the commercial school equivalent to the certificate of the one-year army service, but as yet nothing has come of it. Should this be carried through in time, the students of all the commercial schools would be eligible to the university.

Inasmuch as the Commercial University in Leipzig has excited a great deal of attention and students from all parts of the world have gathered to hear the lectures, I give for the benefit of American students and others interested the course of lectures given during the summer semester of 1900: Political economy; history of political economy, including socialism, money, banks, and the bourse; commercial law, introduction to the study of statistics, German colonial politics, insurance, development of German commerce, chemical technology, development of the foreign commerce of all nations, science of finance, international law, elementary lessons in

Chinese grammar, lectures on China and Japan, lectures on the languages and customs of the people of Indo China, history of the papacy during the Middle Ages, introduction to philosophy and logic, history of German literature, history of England as a world power from 1500 to 1900; physical geography, natural philosophy, and physics; history of the development of education in Germany, state and church in the nineteenth century, comparative history of the colonies of the different European states, constitutional history, pedagogy; natural history, hygiene, etc.; lectures on travel.

In addition to these lectures, there are exercises in bookkeeping, correspondence, and office work, with commercial arithmetic. There are also Handelsseminaren, where professor and students meet once a week for the purpose of discussing questions relating to trade and commerce. Instruction with commercial correspondence is given in the following languages: English, French, Italian, Russian, and Spanish. In addition, arrangements are made for instruction in the German language and correspondence for foreigners.

Thus it will be seen that the student has a very broad field from which to choose those subjects which interest him most. It must be remembered that the Commercial University is connected with the university proper, and that a great many of the above-named lectures have long been established courses in the regular curriculum.

It is natural to suppose that the majority of future directors and teachers in the commercial schools will be chosen from the ranks of those who have completed a course in the Commercial University. But the practicability of this scheme is yet to be demonstrated, as most of the eligible students have had very little, if any, actual experience.

ERNEST L. HARRIS,
Consular Agent.

EIBENSTOCK, *November 16, 1900.*

PREVENTION OF HAILSTORMS BY CANNON.

Since I sent the Department a report on the firing of cannon at clouds to prevent the destruction of grapes by hailstorms,* several newspapers and a number of individuals have requested that "the consul at Lyons make a supplementary report on this subject." With this object in view, I accompanied Mr. Jean Raulin, a professor of agriculture and an official of the Farmers' Alliance (Syndicat Agricole), of the southeast of France, in a visit to the towns of Bois-d'Oinget and Dénicé.

In the first place, all the grape growers of the neighborhood had

*ADVANCE SHEETS No. 807 (August 14, 1900); CONSULAR REPORTS No. 241 (October, 1900).

been invited to witness the trial of two guns, especially constructed as hail destroyers. In the second place, Dénicé, a general jollification was organized to give vent to the joy of the grape growers over their success in vanquishing their most dreaded enemy—the hail.

Two long cannons were displayed in each place, almost identical in shape, but differing in the manner of firing. The subjoined cut represents both:

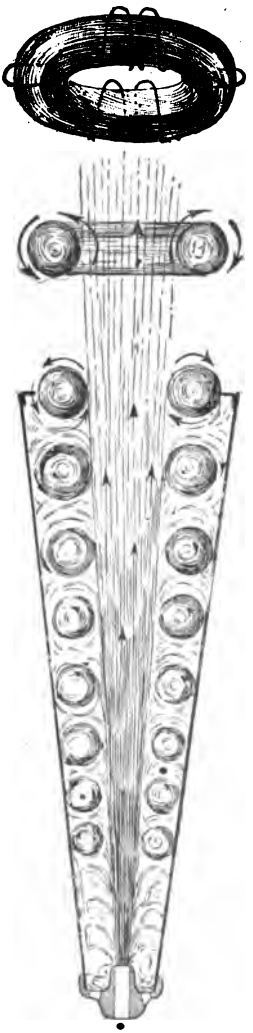
CANNON A. ROLLET.

Each gun is of the shape of an inverted cone, the opening at the mouth being 28½ inches wide. It is planted upon a tripod 3 feet high. The gun itself is 6 feet 6 inches high above the tripod. It is made of thin boiler iron. At its base is a forged breach, which holds a forged iron block. In the center of this block is an aperture 6 inches long, about the size of a large dynamite cartridge, in which is placed a metallic cartridge containing 80 grams of blasting powder, wadded with a cork and tamped like an ordinary miner's blast.

It is discharged by a needle on a lever attached to the base of the forged iron holder.

As many as fifty shots were fired in my presence in order that I and Vice-Consul Browne might inspect the working of the guns.

The detonation is very loud. As soon as the lanyard is pulled, flame is visible at the mouth of the gun, followed immediately by a wreath of smoke. The action of the powder on the air is represented in the following cut:



A shrill whistling sound immediately follows the firing of the cannon and is heard for fourteen seconds. At a distance, this whistling is much louder than near the gun. I am told that it travels at a speed of 330 meters per second—4,620 meters in fourteen seconds, which is nearly 2½ miles. During the firing, a few drops of rain fell.

I interviewed from twenty to thirty large wine growers who used

the cannon last summer. They were all emphatic in their belief in the efficacy of fighting hail with gunpowder. They said that if the weather were hot and they saw the clouds forming, they prepared for a charge. If the clouds were moving rapidly, their direction was changed or the movement was stopped by the firing. They were torn asunder and broken into shreds, and a copious fall of rain soon followed. In localities where great losses from hail have been incurred every summer, the cannons were used last summer and no hail fell. Two or three miles distant, where no cannons were fired, the hail was very destructive. At Dénicé, in the Beaujolais, the grape growers have suffered from hail seven years out of the last decade. They think all the conditions favored hail last summer and that they were protected from its destructive ravages by their cannon.

One cannon protects nearly 75 acres of land.

The expense of equipping a shooting station is:

One cannon	$25.00
Cabin for cannoneer	10.00
Ten cartridge cases	6.00
Ramrod	.10
A needle	.10
Horn and lantern for signaling	1.90
Freight	1.90
Total	45.00

The cost of operating a gun for five hundred shots, not including labor, is $15.50.

The cannoneer is insured against accidents for a season for $2.

At the meeting which followed the exhibition, the general secretary of the alliance, Mr. Silvestre, delivered an address in which he cited many proofs of the efficacy of the cannon against the hail. Several grape growers took the floor and asserted that their vines were destroyed, while those of their neighbors who were under the protection of the cannon were uninjured.

An agricultural paper announces that a vast defensive alliance has been formed in the French Alps, including the grape growers of five Departments, for the purpose of buying cannon and powder for war against the hail next summer. The grape growers everywhere believe in the cannon. Dr. Paul Cazeneuve, one of the most distinguished scientists of France, says the question is still in the domain of experiment and that nothing is proven; "that the commune of Dénicé was not this year on the line of the hailstorm and was only spattered by the heavy surrounding storms." He adds that "if a number of communes where cannon were fired were on the line of the hailstorm and were protected and the others were

subjected to great losses from hail, that would prove the efficacy of the cannon." The wine growers say this is just what happened. Dr. Cazeneuve thinks that no amount of cannon firing would influence great storms, and asks what these cannons would have done against the terrible cyclone at Galveston. But he thinks the experiments should be continued "systematically and scientifically," and that "when it shall have been demonstrated that moderate hailstorms can be conquered, then it will be time enough to take measures against hurricanes."

The doubts of this learned scientist will not prevent many thousands of cannon from being used in the vineyards of France next summer.

In 1899, two thousand cannon were engaged in cloud shooting in Italy. Last year, the number had swelled to fifteen thousand. The Italian Government goes so far in recognizing the efficacy of the cannon as to furnish powder to grape growers at 3 cents per pound.

The director of the Agricultural Societies of the Southeast of France, a union of farmers' alliances, has sent a report to the French Minister of Agriculture on this subject. He witnessed many demonstrations against hail in France and was a delegate to the antihail convention in Italy. He says in his report that "we can not conclude that, in all cases, the use of cannon will afford complete protection, but it is undeniable that the results obtained are most interesting and give veritable hopes for the future."

Before the present improved cloud destroyers were in use, vine growers shot powder from a sheet-iron case fixed in a strong box on the trunk of a tree. In some parts of France, they rang, and still ring, church bells, believing that the vibrations in the atmosphere affected the elements. If the hail continued to fall in spite of the ringing, they averred that it would have been worse but for the clangor of the bells.

A pamphlet written by Mr. V. Vermorel devotes eighty octavo pages to this subject. M. A. Guinaud has also written a pamphlet on Firing against the Clouds, in which theory and practice are fully discussed.

The bibliography on the formation of hail and the methods of combatting it, cannon firing at clouds, and subjects relating to the preservation of vineyards from storms comprises one hundred and seven distinct works, the titles of which are given in the Vermorel Appendix.

A hail-firing congress is to be held in Padua, Italy, November 27, 28, and 29 to discuss this subject and to examine the different kinds of cannon.

JOHN C. COVERT,

LYONS, *November 8, 1900.* *Consul.*

DEVELOPMENT OF THE ZURICH TRAMWAYS.

Most of the street railways of Zurich are owned by the municipality, and it is only a question of time when the few private lines still holding franchises will also be under the control of the city officials. Municipal ownership of street railways is gaining ground greatly in Europe.

The fare in Zurich is to-day 12.5 centimes (2.5 cents) when buying the tickets in block books, but will within the course of a few years be lowered to 10 centimes (2 cents). It is remarkable that the city can run the street railways so cheaply, considering the expensive and solid way in which the tram lines are constructed and the high price of soft coal, which costs from 33 to 40 francs ($6.37 to $7.72) per ton delivered at the power station.

During the years 1898–1900, the city of Zurich has changed its horse-car lines into electric lines with the overhead-trolley system, and also largely extended the mileage. The total length of track is now 40 kilometers (25 miles) and the number of cars 150, of which 40 are trailers. The electric lines have all been constructed by Mr. J. Sigfrid Edström, a Swedish engineer, who received his technical education in the United States. Mr. Edström, upon his arrival in Switzerland, found the electric-street-car lines in a very bad state, in consequence of using inferior material. In rebuilding and extending the tramways of Zurich, Mr. Edström did his best to introduce American street-railway material. In buying the rails, however, he found that, owing to difficulties in the ocean transport, the American rails could be had only in lengths of 30 feet, while 60-foot rails were desired. As rails of this length could not be had on the Continent, it was finally decided to use Phœnix & Girder rails (German) of 12 meters (40 feet) length. Without doubt, the American manufacturer of steel rails would have a great field for his overproduction if rails of greater length could be shipped across the ocean.

The electric rail bonds used in Zurich are from a New York firm. One of the new lines has been built with cast-welded joints without any electric bonds. The track itself is laid very securely on heavy stone or concrete foundations. The overhead-trolley wire is generally fastened to the houses, a special sound breaker being used to avoid the transmission of noises into the house. This arrangement is very satisfactory from an æsthetic point of view, as there are very few poles in the streets. Where houses can not be used, the wires are fastened to tubular steel poles of German origin, solidly fastened in concrete foundations. Many of these posts also serve as poles for gas or electric lamps.

The cars were built by two Swiss factories, but with Peckham (New York) trucks. The street-car motors and controllers are all of American manufacture.

The underground cables, as well as the electric generators, the steam engines, and the switchboard, are from Swiss factories. Several machines of American make are used in the repair shop.

Mr. Edström, the engineer in charge, has recently accepted a position as director of the tramways of Gothenburg, Sweden, where extensive construction of electric-street-car lines will take place within the near future.

A. LIEBERKNECHT,

ZURICH, *November 1, 1900.* *Consul.*

WIRELESS TELEGRAPHY BETWEEN BELGIUM AND ENGLAND.

There has been recently established at La Panne, Belgium, a station for the exchange of wireless telegraphic messages between Belgium and England. The receiving apparatus to be used on the English coast was taken across a few days ago from Ostende on board the Dover-Ostende mail boat *Princess Clementine*, which is also fitted up with temporary apparatus to be used in the experimental trials. La Panne has been selected on account of its being the point on the Belgian littoral nearest the English coast. The mast of the Marconi station at La Panne is 130 feet high. To the foremast of the steamship *Princess Clementine* is affixed an additional mast, which increases its original height about 60 feet. From this extremity, the telegraphic waves will be projected toward each coast. A special room has been fitted up on board the steamer for the instruments, and from this room the cable will be carried to the top of the extended mast. It is confidently expected to obtain communication between ship and shore for at least 30 miles, which is about halfway across. With stations at La Panne and Dover, those on board the vessel would be able to keep in touch with the land during the entire crossing.

On November 3, experiments began about 5 p. m. Telegrams were exchanged between the boat, then moored at the Ostende wharf, and the station at La Panne. Later in the evening, several of the Marconi men went on board the vessel and communicated with the land station throughout the crossing, except when they arrived in English waters. Communication was then discontinued, as the Belgian Government has not yet received from the English

Government authority to telegraph from Dover by this new system. This week—probably Wednesday or Friday—the official trial under the supervision of the Government delegates will be made.

The experiments showed that replies arrived with the same regularity and celerity as ordinary telegrams. When about 40 miles from Ostende, the captain of the vessel was able to telegraph to the stationmaster at Ostende the probable hour of his arrival. Various telegrams were sent from the vessel to Ostende, Brussels, Dover, London, and to the officers of the chief bureau and branch offices of the Marconi Company. The reception of each message was acknowledged promptly, the first and last letters being given in each instance.

GEO. W. ROOSEVELT,
Consul.

BRUSSELS, *November 6, 1900.*

Under date of November 12, the consul adds that a message was sent from the *Princess Clementine* to the station at Dover Court, Essex, a distance of nearly 90 miles, including many miles of cliffs and sea.

ELECTRICAL PROGRESS IN BRUSSELS.

The company which was organized in this district in 1898 to establish electric traction on navigable ways in Belgium closed its books for the first time on June 30, 1900, with a balance of 26,291 francs ($5,074). Nearly all the time since its organization has been devoted to erecting buildings and putting in machinery. Electric traction was first put into operation by the company between Virginal and Ruysbroeck, a distance of 22 kilometers (13.669 miles), and worked satisfactorily by means of thirty tractors and four electric tugs.

Eleven communes have already contracted with the company for public lighting for a period of thirty years, and other communes are negotiating for the same purpose. The company has recently submitted to the Government proposals for lighting eleven railway stations between Brussels and Charleroi. The managers believe that before the end of the third fiscal year, their contracts will embrace ten thousand lamps, which, estimated at 15 francs ($2.89) per lamp, will represent an annual revenue of 150,000 francs ($28,950).

Negotiations are now going on for supplying 242 horsepower from ten to twenty hours per day. From this branch of the enter-

prise, the company calculates upon an annual income of at least 125,000 francs ($24,125).

It is equipped to supply electricity for towing by day and night, for small and medium industries, and eventually for vicinal rail and tramway lines and night public lighting.

GEO. W. ROOSEVELT,
Consul.

BRUSSELS, *November 24, 1900.*

ELECTRIC TRAMWAYS IN BARCELONA AND VICINITY.

Referring to my former report on electrical tramways in Barcelona, which appeared in the ADVANCE SHEETS OF CONSULAR REPORTS No. 782 of July last,* I beg to transmit the following particulars regarding the progress made toward completing roads already in course of construction, and what has been accomplished in organizing companies and obtaining concessions and franchises for projected roads, as well as those to be changed from horse and steam to electric traction. In as many cases as I have been able to obtain them, the names of the chief contractors or persons who are likely to have charge of the purchase of construction material and equipment are given.

(1) Compañia Anonima; owned entirely in England; completed and running through the principal streets of Barcelona, with a double track of about 25 miles. The chief contractors were Messrs. Dick, Kerr & Co., of England. The trolley wire, trucks, electrical machinery, engines, and motors all came from the United States.

(2) Ensanche line (not named). This line now runs horse cars, and is owned by another English company, although the directors are those of the Compañia Anonima, in conjunction with which it will be operated and connected. The plans and specifications are now being prepared to change the present system of horse traction to electric, and probably the same firm—Dick, Kerr & Co.—will be its chief contractors. This road will be about 4 miles in length, and, although single track, the wirework necessary will be as much as if for a double track.

(3) Barcelona-Horta Extensiones; will run from outskirts of Barcelona to town of Horta, 8 miles distant, with a single line. This road I have already reported on, and is about half completed. The contracts are all let.

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* CONSULAR REPORTS No. 240 (September, 1900).

(4) Barcelona and San Andres. This line, at present steam, is to be changed to electric very soon, as permission for the change has been granted by the Spanish authorities. The same company as the Barcelona-Horta line owns this one, with 5½ miles of double track. No contracts for building this line have yet been let, but information regarding them may be obtained from the Société Anonyme d'Enterprise de Travaux, Liege, Belgium. This company will also build an electric tramway from San Andres to Horta, a distance of 2½ miles.

(5) Barcelona to Badalona via St. Martin; now steam; 10 miles; G. H. Gillis, manager. Nothing has been done towards any change, but the power house now under construction for the Barcelona-Horta Extensiones is being built to furnish power to the three last-named lines.

(6) Compañia General de Tranvias. The present German company has purchased franchises and concessions of the former owners, and the change from steam to electricity should soon be made, as the permanent way has been relaid for 5½ miles. Contracts for cars and equipment have not as yet been let. Details of same may be obtained from Mr. Fengercroff, representing the technical interests of the German stockholders here.

(7) Barcelona to Sans; a mule line of 8 miles, running from the center of the city. This line has lately been purchased by German capitalists intending to introduce electric traction, but they are having some difficulty in obtaining a franchise, owing to the narrowness of streets through which they wish to run; and the objection of property holders to span wires and of the authorities to the poles. The company will probably be compelled to put down underground conduits in the city and trolley in the suburbs. No contracts have been let for this line, nor has the chief engineer been appointed.

The only hindrances to the sale of American electrical goods in Spain, when the prices are the same as those of similar articles from other countries, are the higher duties levied on American imports than on those from nations under the "favored-nation clause," and, of course, there is a prejudice in favor of obtaining machinery and equipment, everything else being equal, from the country of the principal shareholders. A direct line of steamers is now running monthly between New York and Barcelona.

JULIUS G. LAY,
Consul-General.

BARCELONA, *November 16, 1900.*

ESTABLISHMENT OF A FREE ZONE NEAR BARCELONA.

The society established in this city for the development of national industries, known by the name of the Fomento del Trabajo Nacional, has of late strained every effort to find means to alleviate the present depressed condition of Spanish trade.

A commission was sent to Madrid to confer with the Government regarding certain reforms which are considered urgently necessary, in order to assist private enterprise to open up new markets for Spanish products.

Little was at first expected from these efforts, but it now appears that one of the most important reforms suggested has every likelihood of being carried out by the establishment of what is called a "free zone" at this port, where foreign products may be imported and stored free of duty, and where raw materials can be manufactured and prepared for reexportation without having been taxed or their cost increased.

Barcelona, owing to its geographical position, has long aspired to be the first commercial city in the Mediterranean, its formidable rival having been always the neighboring French port of Marseilles. The latter has also, for the past four years, been endeavoring to gain the concession of a "free zone" from the French Government, and it is perhaps the probability of this being soon obtained by Marseilles that has opened the eyes of the Spanish authorities to the fact that such an arrangement would mean a very serious blow to Barcelona, and has induced them to take prompt steps to furnish their own large commercial port with a similar incentive to foreign trade.

The commission, which has returned from Madrid, obtained the promise that a "free zone" would be granted to Barcelona.

The harbor board of works is to carry out the necessary preliminary formalities for petitioning the Government through the Ministers of Marine, Public Works, and Finance.

Though the question has been practically decided at a cabinet council, the laws regulating the working of the scheme have still to be framed. It has been decided that the tract of low-lying land between the southern extremity of the city and the River Llobregat, along the seacoast, will form the proposed "free zone."

As a protection against the sea, the eastern breakwater of the harbor is to be considerably prolonged.

Fuller particulars on this subject will be communicated to the Department as soon as they are available.

JULIUS G. LAY,
Consul-General.

BARCELONA, *November 13, 1900.*

IBERO-AMERICAN CONGRESS AT MADRID.

I have to report that on the 10th instant, an Ibero-American congress was inaugurated at Madrid, under the presidency of the Spanish Ministers for Foreign Affairs, who made speeches welcoming the representatives of the Spanish American republics to the congress.

Without touching on the sentimental element in most of the inaugural speeches, I will endeavor to briefly outline the scope of this meeting of the representatives of the various Spanish-speaking countries. On the part of the Spanish delegates, their aim and object is to open the South American markets to Spain's products, and the following are some of the proposals that are being discussed:

(1) The establishment of free ports, or "zones," at Barcelona and other Spanish ports, with the object of facilitating the export trade to South America. The former has been practically decided upon already.

(2) The formation of an international bank, either with branches in the various Central and South American republics, or with close connections with the banking firms already established and of long standing.

The capital of this bank, it is calculated, should not be less than 30,000,000 pesetas, and should be raised partly in Spain and partly in South America. Some difficulty is anticipated in obtaining the required capital, owing to the doubtful returns that may be expected during the first few years of its existence, especially as the Spanish State securities pay 4½ per cent interest to investors. The Spanish Government is therefore to be asked to guarantee a certain small annual interest, in consideration of the important advantages that will be derived by Spanish trade from the formation of such a banking concern.

(3) In order to more easily come to an exclusive commercial understanding with the Ibero American states, the question will be discussed of the advisability of suppressing the favored-nation clause in all treaties to be made involving any special advantages that may hereafter be mutually conceded by Spain and the Spanish republics. This precedent has already been established in Spain's treaty with Switzerland, for in article 5 the advantages granted by Spain to Portugal or the Spanish American republics are excluded. Portugal, also, in its treaty with Spain, excludes the special concessions made to Brazil. The favored-nation clause that exists in all the treaties between the Spanish American states and European nations, it is claimed, hinders the development of commercial relations between the former states, inasmuch as the smallest concession

granted to any of their neighbors is immediately claimed by all other nations.

(4) An international copyright among all Spanish-speaking countries is to be proposed, with a heavy import duty on all books printed abroad in the Spanish language.

(5) State-regulated emigration agencies, to stop the indiscriminate emigration of the working classes to countries having nothing in common with the Spanish race, supported by private societies at all the different foreign ports of arrival, to look after and assist the immigrants in the Spanish-speaking countries.

(6) Formation of commercial museums in all the chief cities of South America and reduction in railroad and steamship fares, besides other facilities to commercial travelers.

(7) Improvements in the postal service between Spain and Central and South America and establishment of a parcel post. The laying of a cable between Spain and South America is also to be advocated, and the governments of the countries concerned are to be asked to consider the question of establishing a uniform currency.

JULIUS G. LAY,
Consul-General.

BARCELONA, *November 15, 1900.*

FRAUDULENT LETTERS FROM SPAIN.

Minister Storer writes from Madrid, November 21, 1900, in regard to schemes to defraud Americans, which take the form of letters from parties in Spain informing them that property is awaiting them, or that relatives are being detained in prison, and asking for money to cover expenses in the matter. Mr. Storer says that he has had to write so many letters on the subject, since his arrival in Madrid, that in self-defense the legation has been compelled to have blank forms of reply and warning printed for use. The minister continues:

Nine out of ten of these attempts to victimize give the name of the supposed prisoner or deceased, as the case may be, with the addition of the family name of the person addressed. Sometimes the further assertion is made that a daughter—a little girl—is kept in a convent and needs clothing or supplies. Her photograph is often inclosed. We have had four photographs sent here for us to identify. Sometimes the prisoner has valuable furniture or plate, a list of which on official stamped paper is inclosed; or has died leaving a will, of which a stamped-paper copy, countersigned with forged court seals, is sent, in which the chaplain of the prison is made executor, who will transmit the property if the necessary expenses are

forwarded to some address. Sometimes, vast sums of money lie buried in Cuba, the exact spot being known only to the chaplain and notary attending the prisoner at his last moments. Often newspaper clippings, ostensibly from Spanish newspapers, giving an account of some such matter, are inclosed.

A large number of these forgeries, drawn on regular Government stamped paper, have at different times been transmitted by me to the Spanish Government, and I have personally urged the Ministry to exert itself to ferret out these flagrant and open swindles.

The same scheme is in operation in regard to Great Britain, Germany, and Russia.

I regret the number of American citizens who have wasted their time in paying any attention to these letters, and still more the fact that many have allowed themselves to send money and have even undertaken the voyage in the hope of getting property to which they had not the slightest claim.

I ask the Department to give the greatest possible publicity to this long-continued and vexatious swindle.

MALAGA-GRAPE CROP.

I have to report a serious shortage in the Malaga-grape crop. The grapes known to commerce as Malaga grapes are really grown in the province of Almeria, and are shipped to the United States through the agency at the city of Almeria, a fine seaport on the Mediterranean coast, 100 miles from Malaga. They are the finest grapes in Spain and are almost unique in the fact that they maintain their freshness, firmness, and flavor for months after being cut from the vine. Thus it happens that in all the great cities of Europe and the United States, these grapes are the choicest article of fruit to be had generally in midwinter.

In 1899, the crop amounted to about 800,000 barrels. This year, up to the 15th of September, the promise was even better than usual, and it was estimated that fully 1,000,000 barrels would be gathered. Unfortunately, beginning on the 15th of September, the provinces of Malaga and Almeria were visited by a succession of rain storms, which wrought great damage to the Malaga raisin crop and considerable loss to the Almeria grape crop. But the loss in the province of Almeria was not so great until the inundations of October 20, 21, and 22 swept down upon the great vineyards. Not only were the grapes still on the vines much impaired in quality, but there was a large outright loss.

Last year, there were exported from this consular district to the United States about 160,000 barrels of these grapes. This year the exportation will fall short fully 50,000 barrels, and in the whole crop there is a proportionate shortage. It may be expected, therefore, that Malaga grapes will be scarce and dear this winter, not only in New York, but in London and Paris.

BENJ. H. RIDGELY,

MALAGA, *November 9, 1900.* *Consul.*

PROPOSED TUNNEL FROM EUROPE TO AFRICA.*

A French engineer named Berlier has recently proposed to the Governments of Spain and Morocco the construction of a tunnel under the Strait of Gibraltar for the double purpose of establishing railway connection between France and Algiers and of bringing Morocco into closer connection with European civilization. Mr. Berlier believes that the construction of a submarine tunnel from Vaqueros Bay, in Spain, to Tangier, in Morocco, is perfectly feasible, as the depth of the sea in this vicinity does not exceed 400 meters (1,300 feet). The submarine length of the tunnel would be 32 kilometers (nearly 20 miles), the entire length being 41 kilometers (over 25 miles) and the maximum grade 25 feet per 100. It is proposed to establish railway connection in Europe by means of a line following the Spanish coast and passing through Tarifa and Algeciras. In Morocco a line would be constructed from Tangier to Ceuta, Tetuan, Melilla, and Remours, connecting with the Algerian railway system at Tlemcen. Mr. Berlier is convinced that in building the tunnel sufficiently wide for two tracks, no greater obstacles will be encountered than those which have been successfully overcome at Mont Cenis, the St. Gotthard, Arlberg, and the Simplon. The accuracy of this opinion appears, however, doubtful, for the ventilation of a submarine tunnel and the removal of the constantly accumulating water would present great difficulties and prove very expensive. Nevertheless, Mr. Berlier believes that, by using a new process, which is his secret, the cost would not exceed 3,000 francs ($579) per meter (39.37 inches). This is what the Simplon Tunnel cost, the amounts at St. Gotthard and Arlberg being, respectively, 3,800 and 4,000 francs ($733.40 and $772). Mr. Berlier also thinks that by working simultaneously at both ends of the tunnel 4 kilometers (2½ miles) could be completed annually, and that thus the work could be finished in seven years. In this case, the total cost of the tunnel would be about 123,000,000 francs ($23,729,000). Placing the cost of the line from Tangier to Algiers at 90,000,000 francs

*See ADVANCE SHEETS No. 890 (November 19, 1900).

($17,370,000), the entire connecting line from Spain to Algiers would cost 225,000,000 francs ($43,425,000).

The French press criticises the project unfavorably, on the ground that it seems hardly credible that the passenger and freight traffic between France and Algeria could be diverted to this indirect and expensive route. It is also believed that Mr. Berlier has overestimated the earning power of the road in assuming that the daily traffic would amount to 600 passengers and 700 tons of wares, making the receipts from the tunnel 7,000,000 francs ($1,351,000) and the receipts of the land lines 6,200,000 francs ($1,196,600).

GEORGE H. MURPHY,
Consular Clerk.

MAGDEBURG, *October 26, 1900.*

FRENCH WOOL INDUSTRY.

The supply of washed wool for the French industry was 88,000,000 kilograms (194,004,800 pounds) in 1890. This figure has varied somewhat in the last ten years, being 105,000,000 kilograms (231,483,000 pounds) in 1893, 109,000,000 kilograms (240,301,400 pounds) in 1896, and only 103,309,000 kilograms (227,755,021 pounds) in 1898.

France makes a specialty of combing, and possesses a number of large establishments, particularly in the Department of the North. She exports a large quantity of combed wool, and the export is constantly increasing, rising from 7,765,000 kilograms (17,118,719 pounds) in 1890 to 19,062,000 kilograms (42,024,085 pounds) in 1898. Her best customers are Russia, Germany, Belgium, and Spain. The home consumption has decreased somewhat, on account of the removal to other countries of several spinning establishments, which, however, still buy their combed wool in the French market.

French mills produced 68,191,000 kilograms (150,333,878 pounds) of wool in 1898, valued at about 500,000,000 francs ($96,500,000). Five million two hundred and twenty thousand kilograms (11,508,012 pounds) of this production—viz, one-sixth of the amount—was exported.

There were imported 1,933,500 kilograms (4,262,594 pounds) of woolen yarns and 765,000 kilograms (1,686,519 pounds) of hair yarns; also 20,000,000 kilograms (44,092,000 pounds) of shoddy and mixed yarns—making about 85,700,000 kilograms (188,934,220 pounds) of yarns for the use of French weaving establishments. These establishments make many and varied goods.

The principal centers for cloth manufacture are Roubaix-Tourcoing, Sedan, Elbeuf, Rheims, Vienne, Mazamet, and Châteauroux. Combed-wool cloth and cheviots are principally made in the Department of the North. According to the customs statistics, the cloth

production in France amounted in 1897 to 206,000,000 francs ($39,758,000).

Roubaix and Tourcoing manufacture armure goods, jacquards, satin de chine, and a great quantity of novelties.

The following is a table taken from the census of 1896, stating the number of workmen employed in the different branches of the woolen industry, with the percentage furnished by the Department of the North:

Description.	Persons employed.	Proportion in North.
		Per cent.
Wool combing	11,500	87
Combed and carded wool spinning	36,500	51
Wool opening and tearing	700	34
Wool cloth and novelties	37,000	99
Mousseline de laine, cotton or silk	3,700	14
Wool weaving, merinos, flannels	49,000	47
Cashmeres, shawls, etc	1,100	16
Woolen velvets	2,600	12
Wool blankets and cotton flannel	5,500	24

These figures will give an idea of the rank which the Department of the North holds in the French woolen industry.

WOOL EXHIBITORS AT EXPOSITION.

At the exposition of 1900 there were inscribed in the catalogue 132 wool exhibitors of French origin, 32 from Algeria, 4 from Indo China, 1 from the Sudan, 33 from Tunis, 9 from Germany, 26 from Austria, 7 from Belgium, 12 from Bulgaria, 1 from Korea, 10 from Ecuador, 52 from Spain, 17 from the United States, 32 from Great Britain, 9 from Greece, 13 from Hungary, 1 from Croatia, 13 from Italy, 3 from Japan, 25 from Mexico, 1 from Nicaragua, 4 from Peru, 44 from Portugal, 21 from Roumania, 50 from Russia, 5 from Servia, and 1 from Switzerland.

W. P. ATWELL,

ROUBAIX, *November 3, 1900.* *Consul.*

WOOL SCOURING IN FRANCE.

Having read a most interesting article by Mr. Vandenbosch, engineer in a spinning mill at Wambrechies, on the Malard wool-scouring machine, I sought the author and obtained from him a description of this machine, which I think may be of interest to American wool combers and spinners.

The machine serves a triple purpose. It scours perfectly, eliminates from the wool secretions from which industrial potash is obtained, and thus renders the water that passes off into streams less

poisonous. The complete purifying of the waste water may be effected by the addition of less acid, as the acid is not neutralized by the presence of salts of potash.

The machine is an invention of Mr. Georges Malard, a Tourcoing engineer, and has been patented in France and other countries, including the United States. It is largely used in France, some combing establishments producing annually more than 1,000,000 kilograms (2,204,600 pounds) of potash obtained from wool grease and selling it at prices ranging from 35 to 49 francs ($6.75 to $9.46) per 100 kilograms (220 pounds) of carbonate. This potash is obtained from the soluble grease, secreted in the raw wool, that is run off in the scouring process in juice or concentrated liquid, having a density of 12° to 13° Baumé areometer (corresponding density, 1.0744 to 1.099).

This liquid is evaporated and calcinated in special ovens made of masonry, and leaves a saline residue of spongy form and gray blue in color. This product is known as wool potash, and contains from 75 to 90 per cent of carbonate of potash and very little soda.

It is much used in this consular district in glass works, the manufacture of soap and chemical products, in the preparation of refined and caustic potash, and in the manufacture of prussiate of potash. It has thus great commercial value.

The Malard scouring machine is very simple, requiring neither cellar, cistern, nor upper story, like the old machines. It is movable, works on a level, and, being automatic, requires no special superintendence. One workman can easily feed several machines that extract the grease, and consequently several washing machines, since the wool leaving the first machine falls directly into the first tub of the second, or washing, machine, which may be of any pattern.

The wool is first spread on an openwork metal plate of about 6 meters (6.5 yards) in length and carried over this to the first washing bath. The plate is of malleable sheet iron and serves to carry the wool in layers of 25 to 50 centimeters (9.8 to 19.6 inches). It is the invention of Mr. Paul Malard, of Tourcoing. It is extremely solid, holds its shape, and lasts indefinitely, as it offers the maximum of resistance. It is manufactured in different styles and can be used in many machines requiring continuous motion. This plate is placed over a vat divided into six compartments, which is placed next to the receiving tub of any washing machine.

A battery of centrifugal pumps puts in motion a small quantity of the liquids contained in the compartments, so that they moisten and pass through the layer of wool, eliminating its grease. The wool in its progress receives each one of the dissolvents, the strength of which decrease in regular proportion as the wool reaches the point from which it passes into the receiving tub.

The pumps are worked by a single belt and are started into action simultaneously with the plate, by a single turn of the gear.

An ingenious mechanism produces the automatic evacuation of a variable amount of the first grease drippings, when sufficient density is obtained. Hinged valves worked by floats constantly maintain a high level in each of the compartments of the machine, so that they neither overflow nor get empty.

The automatic passage of the liquids from one compartment to another is obtained by means of these hinges. This passage is regulated as required and is in an opposite direction from the movement of the wool.

A very simple and absolutely sure contrivance regulates the supply of warm water for rinsing. This water, which takes the last alkaline traces from the wool, then passes into the last compartment of the machine. Its flow is constant, as it must supply the loss of liquid sustained by the receiving compartment, which pours the liquid through succeeding compartments by means of the valves spoken of above.

The automatic operation of the machine, regulating the duration of the cleansing process, preserves the strength of the wool and gives a clearer white. The wool is impregnated successively with liquids that lose in alkaline properties as they gain in heat, until the wool reaches the temperature of the first washing bath.

The Malard machine permits absolute cleansing or partial cleansing to any degree desired. All of the wool may leave the machine carrying a portion of grease regularly distributed, or it may be absolutely freed from the grease that clings to its filaments, by means of six liquids of decreasing density (12°, 9°, 7°, 5°, 3°, and 1° Baumé), then by rinsing in warm water.

The liquid products are usually 2° greater in density than in other modes of extraction, and this can readily be raised to 10° even with lamb's wool not rich in fatty matter. This is regarded as a great factor, in view of the constant rise in price of coal.

Australian wool gives about 160 grams of carbonate of potash and fine qualities of Buenos Ayres, as high as 190 grams to each kilogram of combed wool.

The Malard machine has a capacity per day of ten hours of 4 to 9 cubic meters (141 to 318 cubic feet) of grease, 12° Baumé, according to the kind of wool and capacity of washing tub. Each cubic meter (35.36 cubic feet) yields about 78 kilograms (172 pounds) of wool potash, selling for about 15.50 francs ($2.99) per meter.

W. P. ATWELL,

ROUBAIX, *November 8, 1900.* *Consul.*

BUTTER AND MARGARIN IN BELGIUM.

Consul Roosevelt, of Brussels, under date of November 29, 1900, sends the following translation of the law relative to the butter and margarin trade of Belgium, which goes into effect January 1, 1901:

The butter and margarin trade is subjected to the following stipulations, independent of those of articles 454–457, 498, 500–503, and 561, 2 and 3, of the criminal code relative to adding to articles of food matters of a nature gravely prejudicial to health; to disguised, falsified, tainted, or spoiled food, those of the law of May 4, 1900, as well as those of the royal decrees relative to utensils, vessels, etc., used in the industry and trade of alimentary matter, and to coloring matters:

ARTICLE 1. Margarin destined for sale must be thoroughly mixed, during the operation of churning, with at least fifty parts of sesame oil and one part of potato starch freed of water for 1,000 parts in weight of the fats and oil employed in its manufacture.

ART. 2. Margarin coming from manufactories or warehouses of wholesale dealers shall be shipped and delivered in receptacles encircled by a band of from 5 to 10 centimeters (2 to 4 inches) in width and of a bright red color. These receptacles shall bear on all sides the inscription "Margarin," marked in black, indelible letters on a white background of at least 2 centimeters (0.7874 inch) wide and free from any other inscription. If the sides are formed by a single curved surface, the inscription "Margarin" shall be repeated four times, so as to be visible in any position that the receptacle may be placed. The receptacles shall also bear the name or firm name and address of the manufacturer or dealer.

ART. 3. There shall be understood by abnormal butters in the interpretation of article 10 of the law of May 4, 1900, those that can not with certainty be declared falsified, tainted, or spoiled, but that present at least two of the following characteristics:

Indication of refraction (Abbé-Zeiss) at 40° C. superior to 46°.

A critical temperature of solution in alcohol at 99.1° G. L. superior to 59° C.

A density at 100° inferior to 0.864.

Indication of volatile fat acids (Meissl) inferior to 25.

Continuity of fixed fat acids (Hehner) superior to 89.5 per cent.

An indication of saponification (Köttstorfer) inferior to 221.

These butters can not be sold or exposed for sale in stores, shops, or elsewhere.

ART. 4. All dealers in magarin are forbidden to employ on packings, bills, signs, or on any commercial document intended to designate their industry or their products, the words "milk, butter, cream," or the derivatives of these words, or woodcuts or engravings significant of the milk or butter industry.

ART. 5. Butter containing more than 18 per cent of matter (water, lactose, casein) other than fatty coloring, or salt substance, can not be sold, exposed for sale, kept, or transported for sale or for delivery without a label bearing, printed in distinct type, the words "Beurrelaiteux" (milk butter).

ART. 6. Are declared injurious by application of article 561, 2, of the criminal code, modified by article 5 of the law of August 4, 1890:

(1) Butter and margarin manufactured from milk the sale of which is prohibited.

(2) Butter or margarin to which antiseptics or glycerin may have been added.

Are prohibited, the sale, delivery, or exposition for sale of these commodities as well as of margarin which has not been prepared as food by means of fat, or manufactured or imported according to the regulations relative to the meat trade.

ART. 7. Violation of stipulations of articles 1, 2, and 3 of the present decree will be punished by penalties provided for by the law of May 4, 1900; violation of articles 4, 5, and 6, by penalties established by the criminal code.

ART. 8. The royal decree of March 11, 1895, relative to the butter and margarin trade is revoked.

ART. 9. Our Minister of Agriculture is instructed with the execution of the present decree, which will enter into force, as well as the law of May 4, 1900, on January 1, 1901.

Given at Paris, October 31, 1900.

LEOPOLD.

ANTWERP IVORY MARKET.

The fourth quarterly sale of the year was held on the 30th and 31st days of October last, the ivory offered for sale and sold being as follows:

Kongo:	Pounds.
Hard	136,544
Soft	10,963
Angola	15,612
Kamerun	14,574
Gaboon	4,032
Abyssinian	3,220
Mozambique	2,306
Zanzibar	1,878
Senegal	178
Total	189,307
Hippotamus tusks	205
Rhinoceros tusks	48
Divers curiosities	440
Grand total	190,000

The totals for the corresponding quarter of preceding years were:

	Pounds.
1899	169,050
1898	110,230
1897	165,345
1896	132,276
1895	156,526

On the first day of the sale, the prices paid for heavy and medium weight tusks were 38 cents under the average and for the light tusks and scrivailles of good quality 19 cents. The demand for the poor qualities was particularly small, and the prices fell by 57 cents; while the tusks for bangles and balls were in strong demand, the prices paid being good. On the second day, the prices paid for ivory of the Kongo, Angola, and Kamerun variety showed an increase

of about 9 cents per kilogram (2.2046 pounds), over those of the preceding quarterly sale.

The stock on hand at present amounts to about 228,176 pounds, as compared with 259,971 pounds in 1899, 176,368 pounds in 1898, 134,480 pounds in 1897, and 136,685 pounds in 1896.

GEO. F. LINCOLN,
Consul-General.

ANTWERP, *November 8, 1900.*

NEW NAIL FACTORY IN BELGIUM.

I send the following data respecting a new nail factory, known as the "Globe Nail Works," recently established at Marchienne-au-Pont, in this consular district, which may be of interest to our manufacturers engaged in similar industry.

Although the construction of the Globe Nail Works was not finished until July 1, 1900 (the necessary machinery is still incomplete), manufacturing was begun in the month of March and gradually increased until, at the end of June, the production amounted to 300 tons. The works are equipped to produce not less than 10 tons of nails per day, and, if required, as much as 250 to 300 tons per month. The maximum production of 10 tons per day exacts a motor force of 175 horsepower, 80 of which is furnished by turbines worked by motor power granted by the Government. The works are constructed on the most improved plans and equipped with the latest improved machinery.

The capital of the company is 1,000,000 francs ($193,000). The assets consist principally of 500,000 francs ($96,500) capital, representing 5,000 ordinary bonds of 100 francs ($19.30); material, 230,698 francs ($44,524.71); real estate, 200,568 francs ($38,709.62); and general merchandise, 227,796 francs ($43,964.63). The receipts of 1899–1900 have been used almost exclusively for building purposes. Notwithstanding the fact that the works have been in operation for a few months only, the profits realized so far amount to 10,905 francs ($2,104.66). The company expects to build a railway from the works to connect with the State line, which will greatly facilitate the shipment of manufactured product and the reception of raw material.

GEO. W. ROOSEVELT,
Consul.

BRUSSELS, *November 8, 1900.*

DEMAND FOR COAL IN ODESSA.

Consul Heenan sends from Odessa, October 16, 1900, copy of a letter from the mayor of that city, asking for certain information regarding the properties and prices of American coal. That the heating problem at Odessa is a serious one, says Mr. Heenan, will be seen by the statement in the mayor's letter that in the event of a still further increase in the price of coal the town authorities will purchase and sell it to the residents, presumably at cost price. The consul thinks that American coal can be brought to the Black Sea ports and sold at a fair, if not a large, profit. The towns of Nicolaiev and Sevastopol, as well as Odessa, are largely dependent upon foreign coal. The Russian fleet on the Black Sea and all southern railways are customers for the best qualities of foreign coal, and there is no reason why the United States should not establish a permanent trade in this article. In view of the importance of the question under consideration, Mr. Heenan suggests that those of our business men who propose to engage in furnishing coal to Russia should send competent and thoroughly trustworthy men to study the requirements of the trade. He believes that coal amounting to from 800,000 to 1,000,000 tons could be sold each year.

The letter reads:

[Translation.]

ADMINISTRATION OF THE ODESSA TOWN MUNICIPALITY,
MAYOR OF ODESSA,
September 29–October 12, 1900.

To the Consul of the United States of North America at Odessa.

In reply to your letter dated August 10–23, I have the honor to inform you that the total consumption of coal for the actual requirements of the various municipal institutions is fixed approximately at 600,000 poods (21,667,200 pounds), of which as much as 450,000 poods (16,250,400 pounds) are for stoves and about 150,000 poods (5,416,800 pounds) are of engine coal for boilers.

Although for the coming winter season the administration of the town municipality has already purchased sufficient reserves of coal, nevertheless I again address you with the respectful request to take upon yourself the trouble of collecting information as to whether, among the American coals, there are such kinds which, not being too hard in quality, compare favorably with English Newcastle—*i. e.*, fully suited for the heating of kitchen ranges and stoves of the kind in use here; at what price such kinds of coal could be delivered at Odessa when an entire ship is freighted; what length of time is required for the delivery of the coal from the place of its mining to Odessa; and to whom one must make the direct offers. All these particulars may be of serious importance in future purchases of fuel by the town.

It is also possible that the administration of the town municipality, in the event of further increase of prices of coal, will take upon itself the purchase of coal for sale to the town population. In that event, the total quantity of the coal to be

purchased may considerably exceed the quoted quantity. I deem it necessary here to mention also the fact that during the last three years the price of coal at Odessa has constantly increased and at the present time has attained 32 kopecks (16.4 cents) per pood (36.112 pounds) for English coal and 29 kopecks (14.9 cents) per pood for good quality Russian coal. Under these conditions, American coal, if it possesses qualities not inferior to the English Newcastle coal and can be sold at a price below that stated, will without doubt find a general sale in the Odessa market, all the more so since of the Russian coal the Dombrovsky variety, which was formerly found on this market in large amounts, is at present not to be had except in small quantities. The other varieties of Russian coal are very soft and give much coal dust, and are purchased only by the poorest classes. The great demand among the well-to-do classes, in spite of the high price, is for English coal of the qualities which are akin to the Newcastle, in view of their solidity, easy inflammability, and possession of properties which produce strong and lasting heat.

P. ZELENY,
Town Mayor.

GLASS IN EGYPT.

All kinds of glassware are at present much in demand in Egypt. In 1898, the imports of glassware (window glass not included) amounted to 1,500,000 francs ($289,500). Lamp glass in particular is wanted and is principally imported from Austria and Germany. The increased use of gas has caused an augmentation of the sales of all kinds of articles for gas lamps. France, Austria, and Germany also furnish large quantities of glassware for electric lamps. Goods out of pressed glass—as, for instance, salt and pepper stands, beer mugs, sugar basins, and all kinds of table glassware of medium quality and prices, spirit and beer bottles, and similar articles—are purchased in considerable quantities.

In 1898, the imports of glassware from Austria amounted to 570,000 francs ($110,010) and those from France to 260,000 francs ($50,180); after these come Germany, Belgium, Great Britain, and Italy.

As regards china, Germany, Austria, and Italy have increased their sales, while France seems to have been doing less business. England and Belgium have also considerably diminished their exports in this line. The French trade included the better-class articles, mostly from Limoges. Italy exports ordinary faïence goods, which are largely in demand on account of low prices.

Would it not be well for our glass manufacturers to cast an eye on Egypt as a likely market for their wares?

OLIVER J. D. HUGHES,
COBURG, *November 17, 1900.* *Consul.*

LEATHER AND SHOES IN EGYPT.

According to a French commercial report, the export of tanned sheep and goat hides from France to Egypt has materially decreased, owing to the keen competition of Germany and Austria. The skins from the latter countries are of inferior quality, it is true, but, being vastly cheaper than the French hides, are crowding the French product from Egyptian markets.

France formerly supplied almost exclusively calf leather for blackened boots; but the market for this leather has greatly decreased, owing to the demand for red and tan colored shoes. This change of fashion has greatly benefited the German export, though for the highest grades England still has the monopoly.

Owing to Swiss competition, the export of shoes from France to Egypt has likewise fallen off. On the one hand, the prices of French shoes are too high, and on the other the French manufacturers do not adapt themselves to the requirements of the Egyptian trade.

If our American shoe manufacturers were to study closely the requirements of the Egyptian trade, they ought to be able to conquer that market with ease; for they certainly should be able to offer a better and cheaper shoe than the Swiss manufacturers.

WALTER SCHUMANN,

MAINZ, *November 7, 1900.* *Consul.*

TRADE OPENINGS IN SOUTH AFRICA.

Large orders are now being placed in the United States for all articles that are needed by a community preparing for business after the close of a war. These articles include sole leather, picture moldings, building hardware and materials, household goods, candy, glucose, machinery, timber, etc. Six ships are now discharging cargo here. A new trade in granite wool produced in the United States is being opened, and heavy orders are being placed, not only for refrigerators and cold-storage plants, but also for building purposes.

The end of the war is near; in my visits to the Boer prisoners, I find that 90 per cent of them desire it to end. A recent list of refugees has been made, and 7,000 mining men, 7,000 mercantile men, and 2,000 "undesirables" have been entered for the Transvaal. These are all white men, who will go without their families. It is safe to multiply these numbers by three, to include the women and children who will finally have to be sent, and this number will be

largely augmented by those who are now on the water. Much impoverishment is to be expected, and the British Government will have to supply the immediate wants of these people. Seeds, agricultural implements, cattle and sheep, lumber, and household necessities must be provided. Arrangements have been made to send trains of provisions to the former Republics to feed the people upon their return. All this means trade for the United States. Within a year after the close of the war, every industry will be booming.

J. G. STOWE,
Consul-General.

CAPE TOWN, *October 22, 1900.*

HINTS TO EXPORTERS OF PAPER.

According to a French report, Austria is crushing French competition in Egypt in the sale of cigarette paper, both on account of quality and price. In writing and printing paper also, Austria commands the Egyptian market, Italy and Great Britain alone competing to some extent.

From Durban, Natal, comes a Belgian report, according to which cardboard is an import article of some importance. The demand is only for first quality cardboard that will bend easily without breaking. Special care must be devoted to the packing of cardboard. It must be packed between wooden boards, wider and longer than the cardboard itself, in order to protect the edges. Belgian cardboard frequently arrives greatly damaged. Imported cardboard is chiefly used by bookbinders.

Waterproof cardboard is also exported to Natal, only of the following dimensions, however: 36 by 18 inches and from 4 to 5 millimeters (0.1576 to 0.197 inch) thick.

The demand for printing paper seems to be on the increase, but only in the better, well-glazed grades. Scotch and German makes are given the preference.

WALTER SCHUMANN,
Consul.

MAINZ, *November 21, 1900.*

GERMAN VS. UNITED STATES TRADE IN AUSTRALASIA.

Consul Dillingham sends from Auckland, October 6, 1900, the following newspaper clipping, the facts set forth in which, he says, apply to Australasia in general:

The German consul-general at Sydney reports to his Home Government that the Australian market has been largely taken possession of by American industry.

Last year, he says, the colony of New South Wales was flooded with American goods, and this has continued through the current year without interruption. Furthermore, he records the remarkable fact that the gain of American business has been made for the most part at the expense of German trade. The following is a comparison of the imports from Germany and the United States for the past six years.

Year.	Germany.		United States.	
1894	£345,364	$1,680,714	£542,427	$2,639,721
1895	425,697	2,071,654	624,268	3,038,600
1896	690,843	3,361,987	1,729,871	8,418,417
1897	900,464	4,382,108	1,877,877	9,138,688
1898	771,626	3,755,118	2,602,964	12,667,421
1899	856,032	4,165,880	2,219,319	10,800,316

In seeking for the reasons why the imports of American goods have increased so rapidly, the consul finds that it is not merely the capacity of the American factories and the quality of American manufactures that explain the phenomenon. He points out that American manufacturers and merchants have pushed their trade in Australia with praiseworthy energy and persistence; and this, together with their willingness to meet the wishes of Australian buyers, has led to the great increase of American trade there. Competent American agents for the various lines of goods, says the consul, are continually traveling over Australia, and advertisements, price lists, and other printed matter are distributed with a lavish hand. Larger American firms have their own permanent representative in Sydney. After pointing out the above facts, the consul draws his application for German manufacturers. He recommends the appointment of agents to look after the interests of German manufacturers on the ground by coming into direct personal contact with buyers. This, he says, would remove many causes of complaint which arise from the fact that German goods for Australia go by way of England and are handled by agents living in England. The agents' commissions must be liberal when an article is to be first introduced, for this requires much time, labor, and patience; and, in general, expense must not be spared at the start, for it is a false notion that the excellence of an article is alone sufficient to make it sell. Hence, concludes the consul, the necessity of continually singing the praises of your goods.

ANNEXATION OF PACIFIC ISLANDS BY NEW ZEALAND.

Consul-General Bray sends from Melbourne, October 4, 1900, articles taken from the Melbourne Argus regarding the extension of the boundaries of the colony of New Zealand and annexation of the Cook and Savage groups of islands, and indicating the contemplated action of the government of New Zealand in establishing a self-government in the Fiji Islands, when, as is anticipated, there will be an effort made by New Zealand to annex the Fijis. This move on the part of the government of New Zealand in attempting to annex the Fiji Islands, says Mr. Bray, is being opposed by the other colonies, and especially by the citizens of Sydney, New

South Wales, who fear, in the event of the annexation by New Zealand, that the tariffs would greatly retard the commerce now existing between the colonies and Fiji. The articles read, in part:

In the house of representatives, the premier moved a resolution extending the boundaries of New Zealand so as to embrace the Cook group, including the islands Atiu, Mangaia, Raratonga, Aitutaki, Mitiaro, Nauke, and Hervey (Manuai); also, the following islands: The Savage group (Niue), Pukapuka (Danger), Rakaanga, Manahiki, and Penryhn (Tongareva). He contended that the colony would act wisely by assisting Fiji to obtain local self-government. In years to come, New Zealand would be a strong, self-contained nation, with colonies of her own. The arikis, or chiefs, had laid down the following conditions for the union: (1) The natives should continue the ownership of their lands; (2) the courts should be similar to the native land courts of New Zealand; (3) commissions should be appointed to define the ownership of particular areas and to decide as to the subdivision; (4) lands to be Crown granted and alienated through the Crown, the rights of owners and occupiers to be preserved and representation given in the New Zealand parliament. A danger might occur if they endeavored to annex islands at a greater distance, but the islands which he proposed to include were geographically an integral part of New Zealand.

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The motion was carried by 37 votes to 4.

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The allotment of the principal islands in the South Pacific is now complete. The first thing that strikes the eye is the preponderance of British possessions and interests. Germany, France, Holland, and the United States are also represented; but all their territories reckoned together compare insignificantly with those of England. Australia is and always must be in population, wealth, and trade the dominating power in this part of the world; but England also has New Zealand, Tasmania, part of New Guinea, Fiji, Tonga, most of the Solomons, the Cook and Savage groups, and a few of the minor islands. Germany has part of New Guinea, the Bismarck Archipelago (off New Britain), the two principal islands of Samoa, one of the largest of the Solomons, and, north of the Equator, the Caroline and Marshall groups. France has New Caledonia, the Loyalty Islands, and, eastward of the Cook group, Tahiti. Holland has part of New Guinea. The United States has one of the islands of Samoa, and, north of the Equator and halfway between Samoa and California, Hawaii. And the New Hebrides are under the joint control of England and France. So there will be five European powers competing for the trade of the islands which are scattered over the South Seas.

New Zealand's apparent idea is to establish a federation which shall embrace herself, Fiji, Tonga, and the Cook and Savage groups. Originally it was hoped to include Samoa, but Germany and the United States have secured that group.

Fiji has been a Crown colony for many years. It has a trade amounting to three-fourths of a million, a population of 120,000, and has been industrially developed by the Colonial Sugar Refinery Company, which employs several thousands of Indian coolies on its plantations. The European population is desirous of coming under the rule either of the Commonwealth of Australia or of New Zealand. A movement definitely favoring the latter is now afoot in the group. Geographically, union with New Zealand has an advantage over union with Australia. Suva, the capital, is 1,140 miles distant from Auckland, 1,540 from Brisbane, 1,770 from Sydney, and 2,227 from Melbourne. The geographical advantage is still more distinctly with New Zealand in respect of the Cook and Savage groups. But the defensive advantage may be with the Commonwealth. And hitherto Australia

much more than New Zealand has supplied the capital and intelligence of South Sea industrial and commercial enterprise. Tonga accepted British protection a few months ago, and, though it is unlikely that the present self-government will be disturbed for some time to come, no other European power can intervene, and, ultimately, no doubt the Tongans will throw in their lot completely with the other British islanders in the neighborhood.

The action of the New Zealand parliament last week, evidently in accord with a carefully premeditated policy on the part of the government, and which must have been sanctioned by the imperial authorities, does not, to any serious degree, extend the boundaries of British influence. The Cook Islands have enjoyed British protection, exercised latterly by New Zealand, for a dozen years, and the Savage Islands are only important on account of their geographical position. They are now brought within the political boundaries of New Zealand, and the governor of that colony is performing the necessary ceremonies of annexation. The system of administering Maori affairs will be applied to them, and they will have representation in the New Zealand parliament. Fiji is in a different position. She must first get self-government, and will then, if the scheme goes well, federate with New Zealand. The remaining British territories in the South Pacific will probably become dependencies of the Commonwealth—at least, their geographical position suggests that destiny for them.

COPPER EXPORTS FROM TASMANIA.

I submit the following table of exports of blister copper from the colony of Tasmania to the United States for the twelve months ended June 30, 1900:

Month.	Quantity.	Value.	
1899.	*Tons.*		
July	251¼	£20,613	$100,313.16
August	251	22,576	109,866.10
September			
October	199	17,914	87,178.48
November	101	9,086	44,217.01
December	757¾	67,651	329,223.59
1900.			
January	301	27,139	132,071.94
February	404¾	36,377	177,028.67
March	553¾	49,851	242,599.89
April	200¾	18,070	87,937.65
May	803¾	72,292	351,809.14
June	200¾	18,063	87,903.58
Total	4,023¾	359,632	1,750,149.12

The bulk of this copper was produced and exported by one mine—viz, the Mount Lyell Mining and Railway Company, Limited, the largest copper mine in Australia. From the opening of this mine until September, 1899, the assay value of 459,924 tons of ore treated was 3.78 per cent of copper, 3.83 ounces of silver, and 0.139

ounce of gold to the ton; the value of the ore, with copper at £75 ($364.98), being £3 17s. ($18.72) per ton. From October, 1899, to March, 1900, however, the metal contents of the ore declined, the 137,000 tons treated during that period only averaging 2.7 per cent of copper, 2.4 ounces of silver, and 0.09 ounce of gold, or, with copper at £75 per ton, of a value of £2 13s. ($12.89) per ton.

JOHN P. BRAY,
Consul-General.

MELBOURNE, *October 19, 1900.*

STEAMSHIP SERVICE TO THE EASTERN PACIFIC.

Consul Doty reports from Tahiti, November 16, 1900, the arrival of the American steamship *Australia* (3,000 tons) on the 13th instant. This vessel, he says, inaugurates the new line between Tahiti and San Francisco, as set forth in his report of March 10, 1900.*

The *Australia* brought about 700 tons of general cargo and will have a full cargo back. It is to be hoped, adds Mr. Doty, that this excellent service will be maintained, as it will give great impetus to United States trade with the eastern Pacific.

Freight rates are as follows: General merchandise, $7 and $8 per ton; lumber, $8 and $9 per thousand feet.

Passenger rates are: First class, $120; second class, $65; steerage, $40; round trip, $180 first class.

Sailings from San Francisco will take place January 6, 1901, February 8, March 13, April 15, May 18, June 20, etc.

A report from Consul-General Osborn, of Apia, dated November 1, 1900, says that the new line of steamers of the Oceanic Company is to be put into operation at once and that Pago Pago will be made the Samoan port of call. This may injure United States trade in Apia, as merchants object to receiving goods via Tutuila. With increased facilities, Mr. Osborn thinks freight rates (which have always been high) should be reduced enough to cover the cost of quick transportation between Pago Pago and Apia. Many American goods, he adds, come via Sydney. United States kerosene goes east to the seaboard, thence 15,000 miles to Sydney, thence 2,900 miles to Apia, and is delivered cheaper than if it came direct from San Francisco.

*See ADVANCE SHEETS No. 752 (June 11, 1900); CONSULAR REPORTS No. 239 (August, 1900).

NOTES.

Swine Fever in New Zealand.—Consul Dillingham writes from Auckland, December 4, 1900:

In reply to numerous inquiries from the United States regarding the decrease of swine in this colony, I have to report that there are at the present time in the Auckland district of the colony a good many cases of swine fever. Hog breeders in the South Island have, on several occasions in the past, suffered from the ravages of this fatal disease among their swine; but in this district, so far as is known, swine fever has only shown itself recently as an epidemic. The agricultural department is taking stringent measures to check the spread of the malady, and, as an initial step, two veterinary surgeons of the department are engaged in ascertaining to what extent the fever is prevalent in this district. It is commonly reported that there are many animals within a few miles of Auckland that are now suffering from fever. For some time past, veterinary inspection of premises where swine are kept has been observed. It seems to be the wish of the authorities to create as little alarm and also as little inconvenience and disturbance to markets as possible; therefore, before more rigorous measures are found necessary, the authorities are attending to the separation of diseased from healthy animals, and in cases where there are grounds for suspicion the hogs are isolated and orders are issued not to remove any of them from the premises. If necessary, more drastic measures will be resorted to to prevent a spread of the fever. The symptoms that have been most noticeable thus far are coughing, rapid breathing, and diarrhea. The affected animals generally stand with their backs more or less arched, and appear sick. Toward the end of the attack, paralysis of the rear legs takes place.

Wool Sales at Melbourne.—Consul-General Bray writes from Melbourne, October 19, 1900:

The opening sale of the Melbourne wool season was held on October 17, 1900. The sale attracted crowded attendance, and keenness of bidding characterized it from start to finish. A heavy fall has taken place between the opening and highest rates of last season and those of this sale. As far as can be judged from the comparatively few clips disposed of, prices are about 40 per cent for

merino fleece and about 45 per cent for merino pieces and bellies below the opening rates of last season. In greasy wool, the highest price realized was 8¾d. (17½ cents), other prices being 8d. (16 cents) and 7d. (14 cents); and scoured brought 16d. (32 cents) and 15½d. (31 cents). No American buyers were present at the sale, though it is estimated they will purchase about 20,000 bales during the season.

Pianos in Brazil.—Under date of December 3, 1900, Vice-Consul-General Hanauer, of Frankfort, sends the following:

The Austro-Hungarian consul-general at Rio de Janeiro, in a report to his Government, calls the attention of his countrymen to the favorable chances for selling pianos in Brazil. He says:

French pianos are well introduced here, but these instruments have of late deteriorated in their quality. After two or three years' use, their sound becomes unbearably metallic. Nor is sufficient regard paid to the hot and moist climate. Still, for want of better instruments, and because the French article has been well advertised, they continue to meet with ready sale at high prices. Last year, a few pianos of Bohemian (Austrian) manufacture were introduced in Curityba, the capital of the State of Parana, and have given great satisfaction. One of the best-selling pianos is the short square, called "Mignon," 175 centimeters long, 7¼ octave, which sold at the factory for 400 Austrian florins (about $160 in United States currency). Pianos which are more popular and most in use cost at the factory about 300 florins ($120).

These instruments must be ornamentally and highly finished, have cast-steel frames and light mechanism, which, however, must be impervious to moisture.

Railway Contract in Nicaragua.—Consul Donaldson reports from Managua, November 1, 1900:

The Government of Nicaragua has to-day conceded to Mr. Julio Wiest the contract for about 38 miles of railroad which is to connect the capital directly by rail with Leon and Corinto, by a road around the lake connecting at La Paz with the western division now in operation. This will avoid the delay and cost of changing freights from the cars to steamboat at Managua and from steamboat to cars again at Momotombo. The railroad is to be finished within two years and is to cost $23,000 in Nicaraguan currency per mile, which at the present rate of exchange is about $8,000 in United States gold. Although very desirous to build the Rama Railroad, connecting Lake Nicaragua with the Rama River and thus with the Atlantic navigation through Bluefields, no contract has yet been given for its construction, owing to lack of funds to assure its completion. This is a good opportunity for American capitalists desirous of investing money in foreign enterprises.

Thread and Cloth Mill Concession in Nicaragua.—Consul Sorsby, writing from San Juan del Norte under date of November 11, 1900, informs the Department that on the 22d of September last the Government of Nicaragua granted Pedro Mas, a native of Spain, a concession to establish a factory for the manufacture of cotton threads and cloths, such as prints, percales, indianas, etc.

This concession, continues Mr. Sorsby, is made an exclusive privilege for a period of five years. It may be transferred (but not to another government), and shall at all times be subject to the laws of Nicaragua. Questions arising shall be settled by arbitration and in no case shall be foundation for a diplomatic claim. The right to form and legalize foreign corporate associations is permitted, such associations to have a representative with full power domiciled in Nicaragua.

South American Steamship Service.—Consul-General McNally sends from Guatemala, November 30, 1900, an advertisement, with translation, announcing the extension of the Pacific Navigation and the South American Steamship companies' lines to San Francisco. The translation reads:

THE PACIFIC STEAM NAVIGATION COMPANY AND SOUTH AMERICAN STEAMSHIP COMPANY.

The above-mentioned companies will begin a fifteen days' service between South and Central America, Mexico, and San Francisco, stopping at the principal ports, carrying passengers and cargo at low prices. The first steamer will leave Valparaiso the 26th of December next and San José probably the 20th of January, 1901. For more details apply to F. W. Melville, special agent for Central America and Mexico.

Peruvian Steamship Company.—Mr. Neill, secretary of legation at Lima, sends under date of October 31, 1900, translation of an article from a local journal regarding the establishment of a national steamship company on the Peruvian coast, which, if successful, is to extend its service as far as Central America and San Francisco. Several projects, he adds, are being discussed by the Lima Chamber of Commerce for the formation of this important enterprise, in order to afford greater facilities to the country's industry and commerce. The article notes the development of other lines of steamers trading on the west coast of America and quotes the opinion that with 1,200,000 soles ($584,400) four steamers might be bought for the coasting service between Arica and Guayaquil, with many advantages to home traffic.

New Bank in Asuncion.—The Department has received from Consul Ruffin, of Asuncion, a report in regard to the establishment, in that city, of a new bank, called "Caja de Credito Comercial," whose purpose is to promote local and foreign commerce. It will be pleased to facilitate all commercial and financial operations between Paraguay and the United States. The managers, says the consul, are active and desire to have their organization brought to the attention of our bankers and merchants. They invite correspondence. Copy of the statutes, sent by Mr. Ruffin, has been filed for reference in the Bureau of Foreign Commerce.

Port Improvements in Brazil.—Consul-General Seeger, of Rio de Janeiro, writes from Para, December 15, 1900:

I have had a conference with the governor of the State of Para, and he calls my attention to the fact that the National Government of Brazil will very shortly (probably by next February or March) advertise for bids for the dredging of the port of Para, and for building some necessary piers. The government of the State of Para will advertise for bids, probably next May, for building sewers in the city of Belem (Para) and for a new drainage system. It is my opinion that American contractors will find here a very profitable opportunity.

Destroying Canceled Bonds in Salvador.—Consul Jenkins writes from San Salvador, November 14, 1900, that the Government has destroyed by fire the bonds known as the English debt, contracted during the years 1889 and 1892, amounting to £800,000, which had been canceled by an English company in compensation for certain rights and privileges in the Salvador Railway, formerly the property of the Government. The consular body residing in San Salvador, he adds, was invited to be present on the occasion and witness the burning of £716,860 canceled bonds, leaving about $11,000, more or less, to complete the original sum that will be destroyed by cancellation. Salvador is now without a foreign debt.

Mining Claims in Mexico.—Consul Griffith writes from Matamoros, November 30, 1900:

There are to-day no overlapping mining claims in Mexico. The Government makes no distinction whatever between a native and a foreigner, and either may denounce mineral veins which have no

legal owner by paying the regular fee for each pertenencia (a square 100 meters on each side). An annual tax of $10 for each pertenencia is required by the Government, and ownership is forfeited by a failure to pay this tax, and not by a failure to work the mine.

German Trade with Canada.—Consul Winter reports from Annaberg, November 27, 1900:

Germany exports to Canada about six times as much as she imports from that country. On the whole, however, German products are gradually losing ground in British North America. The commercial balance in the principal articles of German export to Canada for 1899-1900 stands as follows:

Products.	1899.	1900.
	Pounds.	*Pounds.*
Raw sugar	66,782,766	44,717,885
Woolen goods	419,755	368,388
Ceruse	2,932,238	1,717,383
Railroad axles and wheels	3,465,631	3,904,346
Porcelain ware	277,817	569,668
Toys	249,579	758,264
Cotton and wool hosiery	273,590	190,033

Extension of Beet-Sugar Industry.—Consul Hughes writes from Coburg, December 4, 1900:

On account of so many countries having turned their attention to the cultivation of beets for sugar, the markets of the world are becoming glutted. The European producing lands are Germany, Austria, Russia, France, Belgium, Holland, Sweden, Denmark, Servia, Bulgaria, Roumania, Switzerland, Italy, Greece, and Spain. Persia is just entering the field; Egypt is realizing that her soil is adapted to the cultivation of the beet; the United States is pressing them all, with Argentina and Chile trying to follow in her footsteps. Spain, of late years, has taken great interest in the industry. In 1898 she imported 339,619 kilograms (748,724 pounds) of sugar, but in 1899 she only received 9,229 kilograms (20,346 pounds), and according to the present outlook she will import no sugar in 1900.

American Steel in Germany.—Writing from Frankfort, November 20, 1900, Vice-Consul-General Hanauer says:

Mr. Wiegand, the director-general of the North German Lloyd Steamship Company, at a public festival last week, made a speech in which he defended his company against the attacks made on it by

German industrial circles on account of the company's late purchase of 1,000 tons of steel in the United States. The director said:

We have, during the six years past, paid to German industries over 130,000,000 marks ($30,940,000)—*i. e.*, about 22,000,000 marks annually. The order given to American steel works, amounting to about 300,000 marks, is insignificant compared with these figures. It is not to save 10 per cent in price that this order was given to a foreign concern, but the Lloyd Company would not have reached its present position had it not utilized the improvements offered by outside manufacturers. We would like to see German industry brought to the utmost tension by foreign competition and not afraid to meet it at home; thereby the only possibility exists for us to maintain our place in the international contest for economic fitness.

Tariff Protection for German Boot and Shoe Industry.—Under date of November 20, 1900, Vice-Consul-General Hanauer, of Frankfort, states that the economic committee of the German shoe and boot manufacturers, who lately met in convention at Berlin, resolved to petition the national legislature to raise the tariff on imported shoes, so that leather shoes weighing over 1,500 grams (3.3 pounds) henceforth should pay an import duty of 70 pfennigs (17 cents) per pair; those of 500 to 1,500 grams (1.1 to 3.3 pounds), 1.50 marks (36 cents); and all below 500 grams weight, 2 marks (48 cents). The association claims that this tariff is necessary to protect their important industry, which at present turns out a yearly product valued at 250,000,000 marks ($59,500,000) and pays 40,000,000 marks ($9,520,000) annual wages to 50,000 people* employed in over 1,100 manufactories. This measure is aimed against the influx of American shoes.

Industrial Concerns in Germany.—Consular Agent Harris writes from Eibenstock, November 13, 1900:

There are at present in Germany 296 great industrial concerns which employ more than 1,000 persons each. The total number of persons employed by them amounts to nearly 600,000, and the machinery in use represents nearly 700,000 tons horsepower. The most important concern is the Krupp Works in Essen, where 44,087 laborers are employed. Next to this comes the Hamburg-American Steamship Company, which employs 14,643 persons on sea and land.

Commercial High School for Basel.—Consular Agent Harris reports from Eibenstock, November 24, 1900:

A commercial high school is being planned in Basel. It is to have four departments devoted to commerce and industry, insur-

*About $3.80 per capita per week.

ance, journalism, and all cognate branches. Thirteen thousand five hundred dollars will be spent yearly for its maintenance, one-third of which will be granted by the Swiss Government as a subvention. Only those are eligible who have completed either the Gymnasium or Realschule. Women students are to be admitted. The course will be of two years' length.

Coal Discoveries in Austria-Hungary.—Consul Hughes, of Coburg, writing under date of October 31, 1900, says he has been informed from reliable sources that a very large deposit of so-called "house coal" has been discovered at Barmocz, in Hungary. This deposit, estimated to contain at least 1,600,000,000 tons, is to be developed on scientific lines at once, arrangements having been made to deliver to the railroads from 400 to 500 truck loads per day at a very early date. The quality of this coal, of course, remains to be proved. Another field is also said to have been discovered in Bohemia, but very much smaller in size and of poorer quality, which is, however, to be developed in the early part of next year if the necessary arrangements can be made.

German Sample Room in Constantinople.—Consul Schumann, of Mainz, under date of November 7, 1900, notes that the German sample room at Constantinople, to which he referred in a previous report,* has now been opened. The exhibition, he says, is quite comprehensive, embracing the following list of articles: Furniture, linoleum, lead pencils, earthenware goods, clocks, musical instruments, toys, paint brushes, rubber goods of all kinds; instruments for chemists, apothecaries, and surgeons; porcelain wares; also textile goods, sewing machines, iron bedsteads, garden furniture, heating and cooking stoves (oil and gas), water pumps, ice chests, and safes.

Belgian Mining Interests in Russia.—Consul Winter, of Annaberg, under date of November 14, 1900, quotes the following from the Deutsche Export Zeitung, of Berlin:

> The capital which Belgium has invested in Russia amounts to $95,000,000 and covers one hundred and forty-eight different enterprises. The majority of these enterprises are engaged in mining in the central and southwestern parts of the Empire. Not all of the companies, however, have been paying ones. Averaging the net gain of all the one hundred and forty-eight companies, only 2 per cent dividends have been declared.

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*See ADVANCE SHEETS No. 766 (June 27, 1900); CONSULAR REPORTS No. 240 (September, 1900).

Asiatic Export Bureau in St. Petersburg.—Vice-Consul-General Hanauer, of Frankfort, under date of November 18, 1900, sends the following:

On the 1st of January next, a Russian-Asiatic export bureau will be opened at St. Petersburg. Its aim is to facilitate trade with the Far East. This bureau has a capital of 2,000,000 rubles ($1,010,000) and will have branch offices in Warsaw, Moscow, Odessa, Vladivostock, Chabarofsk, and Tschita.

Market for American Shoes in Tunis and Algiers.—Consul-General Lay, of Barcelona, under date of November 17, 1900, sends an extract from a Barcelona trade journal of recent date, as follows:

The agents of a firm in Palma (Majorca) visited Tunis and Algiers a few days ago, offering white-cloth shoes with leather soles and heels. These goods have a very ready sale in that market, and with slight effort large quantities of shoes could be placed.

Mr. Lay adds that he has suggested to our consuls at Tunis and Algiers the advisability of inquiring into this matter, in order to bring it to the notice of any American firms desirous of competing in that market.

Blankets in South Africa.—Vice-Consul-General Hanauer, of Frankfort, under date of December 4, 1900, says that the Belgian consul in Pretoria, Transvaal, reports that blankets made of shoddy find large sales among the Kaffirs in South Africa. These blankets, called "koogs," are made at Dewsbury, England, and are from 64 by 68 to 72 by 84 inches in size, weighing 4½ and 5 pounds, respectively. They come in three different qualities and have broad red, yellow, and blue stripes on both sides. The importation of these blankets during 1899 amounted to $370,000.

German-African Steamship Line.—Consul Hughes of Coburg, under date of November 30, 1900, calls attention to the establishment of a new East African steamship line, with a large Imperial Government subsidy, to run from Hamburg to the Cape of Good Hope via Las Palmas or Teneriffe and back via the Suez Canal, taking in the East African coast towns.

Coal Prices in New South Wales.—Consul Goding writes from Newcastle, under date of November 6, 1900, that through an agreement of the colliery proprietors, the selling price of coal, which he had previously informed the Department* would be 9s. ($2.19) per ton after January 1, 1901, has again been raised to 11s. ($2.67) per ton.

Coal-Mining Company in Liberia.—The consul-general at Monrovia, Mr. Smith, reports under date of October 15, 1900, the organization of a prospecting company for the purpose of coal mining in the vicinity of Grand Cape Mount.

Cable in Canary Islands.—Consul Berliner reports from Teneriffe, December 5, 1900, that the cable between Grand Canary and Teneriffe is again in good working order. The cables connecting the islands of La Palma and Lanzarotte have also been repaired by a cable steamer.

Consular Reports Transmitted to Other Departments.—The following reports from consular officers (originals or copies) have been transmitted since the date of the last report to other Departments for publication or for other action thereon:

Consular officer reporting.	Date.	Subject.	Department to which referred.
L. L. Stang, Saigon	Oct. 25, 1900	Report of rice market	Department of Agriculture.
Do	Nov. 16, 1900	....do	Do.
Do	Nov. 22, 1900	....do	Do.
O. J. D. Hughes, Coburg	Nov. 11, 1900	Prospective crops in Prussia.	Do.
Do	Dec. 7, 1900	Strikes and lockouts	Department of Labor.

*See Special Consular Reports Foreign Markets for American Coal, p. 299.

FOREIGN REPORTS AND PUBLICATIONS.

Development of French Guinea.—An article in the Bulletin de la Société de Géographie Commerciale, Paris, is summarized as follows:

The greater part of French Guinea may be said to be still an unknown country. Vast regions, important from different points of view, have not yet been visited by Europeans. Konakry, the capital, was a small negro village ten years ago, with barely 200 inhabitants, mostly fishermen and carriers, living upon the few caravans which came there. To-day, the population is estimated at 14,000, of whom more than 300 are Europeans, living in comfortable houses built upon stone foundations. Wide avenues cross the island from one end to the other, and Decanville rails join the new wharf with the market and commercial houses. More than twenty firms are now established, where formerly two—one French and the other German—did all the business, while in the market place representatives of all the tribes inhabiting the vicinity of the Niger may be seen.

A good wagon road, some 75 miles long, connects Konakry with Frigniagbé, the capital of the Kanéa district. Every 10 or 12 miles along the road are caravansaries, built of clay or rude masonry, where caravans coming from the interior of the Sudan find shelter; otherwise, the country along the road seems deserted. Goumba lies to the northeast, a mountainous country, with sharp cliffs rising 500 and 600 feet above the valleys, which latter promise in the future to be of interest for cattle raising. Missidi, in the valley of the River Kolenten, is the capital. Beyond is Fonta-Djalon, a vast table-land of granite. It is not a fertile country, nine-tenths of the surface being naked table-land. When the rains commence in the month of March, a frail and delicate carpet of gramineous plants seems to spring out of the rocks; these reach a height of 3 feet by the month of June, presenting a most enchanting spectacle of luxuriant vegetation with clusters of flowers. Two valuable plants are found in abundance—indigo and rubber. These plateaus, or table-lands, could be utilized for cattle grazing during the rainy season. Timbo, the capital, is almost in ruins. East of Timbo is the fertile valley of the Tinkisso; here rice, maize, and millet are successfully cultivated. The source of the Tinkisso is 3,280 feet above the level of the sea; when it reaches Bissikhrima the altitude is only 984 feet. Several formidable cascades or rapids mark its course; the principal fall is at Kambaya. Engineers are of the opinion that the Tinkisso would furnish motive power sufficient to bring twenty trains daily from Kerreky to the Niger. From Bissikhrima to Dinguira, the country is a desert. Bové is a long succession of rugged table-lands cut by two wide and deep rivers, whose almost perpendicular banks still preserve their forest vegetation. Badiar, to the north, is a flat plain, the beginning of the deserts which extend from the Rio Grande to the Senegal.

The Board of Trade Journal, London, quotes from the Dépêche Coloniale as follows:

The economic development of French Guinea of late years has been very marked. The imports for 1899 were valued at $2,980,250 and the exports at $1,826,069. The

following table shows the value of the imports and exports during the years 1898 and 1899, distinguishing the countries of origin and destination:

Country.	Imports.		Exports.	
	1898.	1899.	1898.	1899.
United Kingdom	$1,001,124	$1,461,047	$949,872	$1,077,280
France	280,505	768,140	81,193	144,243
Germany	220,338	449,200	216,032	265,813
Sierra Leone	178,472	152,801	215,330	256,131
United States	37,862	77,658	.....	.....
French colonies	6,207	28,157	25,846	41,394
Other countries	16,328	43,247	17,119	41,208
Total	1,739,806	2,980,250	1,505,392	1,826,069

The principal products exported during the last two years were as follows:

Articles.	1898.	1899.
India rubber	$1,146,263	$1,349,740
Palm nuts	76,959	79,774
Earthnuts	12,680	25,760
Oxhides	45,111	40,465
Oxen, live	99,094	167,202
Palm oil	9,589	4,475
Gum copal	51,669	49,271
Wax	6,640	8,210
Elephants' tusks	6,816	7,137
Kola nuts	7,263	7,758

The exports of india rubber have largely increased since 1891, as the following table shows:

Year.	Quantity.	Year.	Quantity.
	Pounds.		*Pounds.*
1891	1,827,613	1896	2,096,575
1892	2,098,779	1897	3,084,235
1893	2,196,809	1898	3,732,388
1894	2,195,782	1899	4,094,229
1895	2,087,756		

Economic Conditions in the French Kongo.—According to a writer in the Gazette Coloniale, of Brussels, the French Kongo has begun to develop, from an economical point of view. The customs receipts for the first eight months of the year 1900 show an increase of $60,988 over those of the corresponding period of 1899. This increase is due to the fact that the societies which have obtained concessions in this country are now importing tools and supplies to commence the exploitation of the large territories conceded to them. Already the commercial fleet of the Gaboon-Kongo is of some importance—there are no less than twelve vessels already

at Cape Lopez and in the Ogooué—and the administration is forced to make certain rivers, such as the Como or the M'Bei, navigable. A trial garden has been laid out at Brazzaville, in a place where soundings have shown 24 to 28 inches of vegetable earth with a subsoil of silicious clay; in the neighborhood is found a marshy land which has all the appearance of peat. From this garden, aided by that at Libreville, colonization societies can obtain desired information.

The International Cable Network.—The Nachrichten für Handel und Industrie, Berlin, September 17, 1900, quotes from the Swiss Official Gazette, as follows:

The entire cable network of the world in 1898 was composed of 1,460 lines, with an estimated total length of about 192,634 miles, of which 1,142 lines, with a length of 22,867½ miles, were under government management; the remaining 318, with a length of 169,021 miles, belonged to private companies.

The share of Germany in this cable network is, apart from the cable Emden-Azores-America, only 1.85 per cent, while her share of the world's trade is 12 per cent. The total value of this cable network is estimated at $1,190,000,000, which is distributed among the various government and private companies of the different nations as follows:

Countries and companies.	Government.		Private.			Total.		Per cent of whole.
	No. of cables.	Length.	No. of companies.	No. of cables.	Length.	No. of cables.	Length.	
		Miles.			*Miles.*		*Miles.*	
Germany	58	2,336	1	1	1,280	59	3,616	1.8
France	54	5,788	4	28	13,602	78	19,390	10.1
Great Britain	135	2,287	19	223	110,609	358	112,896	59
British India	111	2,206	1	3	168	3	2,374	1.3
British America	1	1,056	.....	.....	.....	1	1,056	0.5
Bahamas	1	245	.....	.....	.....	1	245	0.1
Australia and New Zealand	31	397	.....	.....	.....	31	397	0.2
English-American Telegraph Company	.....	.....	1	15	14,130	15	14,130	7.5
United States	.....	.....	4	22	21,131	22	21,131	11.1
Russia	9	264	.....	.....	.....	9	264	0.1
North Danish Telegraph Company	.....	.....	1	24	8,025	24	8,025	4.1
Japan	70	1,734	.....	.....	.....	70	1,734	1
East Asia	12	2,048	.....	.....	.....	12	2,048	1
Northeast sea states Denmark Sweden Norway Belgium Netherlands	438	839	.....	.....	.....	438	839	0.4
Spain	15	1,084	.....	.....	.....	15	1,084	0.5
Italy	29	1,221	.....	.....	.....	29	1,221	0.6
Other countries	178	2,184	2	2	.....	178	2,184	0.7
Total	.....	.....	.....	.....	.....	.....	192,634	100

Great Britain is consequently almost absolute master of the entire cable union, and the 6,000,000 telegrams which travel yearly over the cable route pass for the most part through her hands. Great Britain has 14 great ocean cables in working order, 9 of which belong to her exclusively. Africa, America, and India are wrapped about in a web of English cable network. The English Eastern Extension Company manages, besides, over 18,642 miles of cables in East Asiatic and Australian waters. The United States is interested in 5 cables in the trans-Atlantic union. Central America, as far as Peru, is under the almost exclusive control of American companies. The Danish Great Northern Telegraph Company, besides its cables in the Baltic Sea, manages, with the assistance of Russia, the trans-Siberian underground telegraph to Vladivostock, and has extended it from there over all East Asia. France directs, besides the Mediterranean union, the cable traffic in her West Indian and South American possessions.

Ramie Grass in China.—According to a report of the British consul in Kiukiang (central China), ramie grass, or hemp (as it is called in the customs list), has increased in importance as an article of trade. It is cultivated on a large scale in the province of Hupei and is sent by way of Kiukiang to Shanghai. From there it finds its way to Japan, as well as to Canton, Chinkiang, and other Chinese ports, where it is manufactured into a tissue known by the name of "grass cloth," much esteemed by the natives during the hot season. It is usual to harvest three crops a year—the first, sown the autumn previous, matures about the middle of June; the second crop is ready for harvesting in the following month, and the third in October. The second is the poorest crop, as it ripens too quickly and has to endure the greatest heat. The first cutting is, as a rule, the best. In a good season, the grass reaches a height of 70 inches. The ramie is packed in uniform bundles, according to the length of the stalk, and sells at from $7 to $8.50 per picul (133⅓ pounds). The price is fixed in the Japanese market according to 60 per cent of the total production. The shipments during the last five years from the different ports were:

	Pounds.
1895	4,938,533
1896	6,222,400
1897	6,523,333
1898	7,653,333
1899	9,354,133

The value of last year's export was estimated at $400,790.

Machine for Cleaving Diamonds.—An article in La Gazette Coloniale, Brussels, November 19, 1900, says:

The diamond industry is at the present moment very much occupied with a curious invention—a machine for cleaving diamonds. It is known that the work

of cleaving constitutes a special branch, and a very delicate one, in the art of working diamonds. A good cleaver is highly appreciated, for it is to the interest of the merchant that the gem should be cut in the most economical manner possible. Until the present time, notwithstanding all the talent displayed by the cutters, they have never been able to preserve intact certain parts of the stone.

The machine in question, it appears, accomplishes this difficult feat, and the manufacturers will realize great advantages therefrom. The machine was invented in America. The great manufacturers are, at this moment, making trial of it. If it works as well as is promised, the diamond industry will perhaps enter upon a new phase of existence.

Trade of Cook Islands.—From La Gazette Coloniale, Brussels, November 18, 1900, the following is taken:

These islands, discovered by Cook in 1770, have been recently annexed to New Zealand, to which they are relatively near. According to a report of an English resident, Raratonga—whose coffee plantations have just been destroyed by a disease—and Aitutaki are the only two islands accessible for commercial vessels. This injures the development of the rich islands of Mauke, Atiu, and Mangaia. The commerce of importation in 1899 was $65,965 and of exportation $69,197. Half of the exportation is composed of copra; the other exports were coffee, pearls, oranges, bananas, etc.

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PUBLICATIONS OF THE BUREAU OF FOREIGN COMMERCE.*

The publications of the Bureau of Foreign Commerce, Department of State, are:

I.—COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

II.—CONSULAR REPORTS, issued monthly, and containing miscellaneous reports from diplomatic and consular officers.

III.—ADVANCE SHEETS, CONSULAR REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the newspaper press, commercial and manufacturing organizations, etc.

IV.—EXPORTS DECLARED FOR THE UNITED STATES, issued quarterly, and containing the declared values of exports from the various consular districts to the United States for the preceding three months.

V.—SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

Following are the special publications issued by the Bureau prior to 1890:

Labor in Europe, 1878, one volume; Labor in Foreign Countries, 1884, three volumes; Commerce of the World and the Share of the United States Therein, 1879; Commerce of the World and the Share of the United States Therein, 1880–81; Declared Exports for the United States, First and Second Quarters, 1883; Declared Exports for the United States, Third and Fourth Quarters, 1883; Cholera in Europe in 1884, 1885; Trade Guilds of Europe, 1885; The Licorice Plant, 1885; Forestry in Europe, 1887; Emigration and Immigration, 1885–86 (a portion of this work was published as CONSULAR REPORTS No. 76, for the month of April, 1887); Rice Pounding in Europe, 1887; Sugar of Milk, 1887; Wool Scouring in Belgium, 1887; Cattle and Dairy Farming in Foreign Countries, 1888 (issued first in one volume, afterwards in two volumes); Technical Education in Europe, 1888; Tariffs of Central America and the British West Indies, 1890.

The editions of all these publications except Tariffs in Central America, etc., are exhausted and the Department is, therefore, unable to supply copies.

In 1890, the Department decided to publish reports on special subjects in separate form, to be entitled SPECIAL CONSULAR REPORTS. There are now the following SPECIAL CONSULAR REPORTS:

Vol. 1 (1890).—Cotton Textiles in Foreign Countries, Files in Spanish America, Carpet Manufacture in Foreign Countries, Malt and Beer in Spanish America, and Fruit Culture in Foreign Countries.

Vol. 2 (1890 and 1891).—Refrigerators and Food Preservation in Foreign Countries, European Emigration, Olive Culture in the Alpes Maritimes, and Beet-Sugar Industry and Flax Cultivation in Foreign Countries.

Vol. 3 (1891).—Streets and Highways in Foreign Countries. (New edition, 1897.)

Vol. 4 (1891).—Port Regulations in Foreign Countries.

Vol. 5 (1891).—Canals and Irrigation in Foreign Countries. (New edition, 1898.)

Vol. 6 (1891 and 1892).—Coal and Coal Consumption in Spanish America, Gas in Foreign Countries, and India Rubber.

Vol. 7 (1892).—The Stave Trade in Foreign Countries and Tariffs of Foreign Countries.

Vol. 8 (1892).—Fire and Building Regulations in Foreign Countries.

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* Formerly Bureau of Statistics. Name changed to Bureau of Foreign Commerce by order of the Secretary of State, July 1, 1897.

Vol. 9 (1892 and 1893).—Australian Sheep and Wool and Vagrancy and Public Charities in Foreign Countries.

Vol. 10 (1894).—Lead and Zinc Mining in Foreign Countries and Extension of Markets for American Flour. (New edition, 1897.)

Vol. 11 (1894).—American Lumber in Foreign Markets. (New edition, 1897.)

Vol. 12 (1895).—Highways of Commerce. (New edition, 1899.)

Vol. 13 (1896 and 1897).—Money and Prices in Foreign Countries.

Vol. 14 (1898).—The Drug Trade in Foreign Countries.

Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe, Rabbits and Rabbit Furs in Europe, and Cultivation of Ramie in Foreign Countries. Part II. Sericulture and Silk Reeling and Cultivation of the English Walnut.

Vol. 16 (1899).—Tariffs of Foreign Countries. Part I. Europe. Part II. America. Part III. Asia, Africa, Australasia, and Polynesia. Supplement (1900). Tariffs of Chile and Nicaragua.

Vol. 17 (1899).—Disposal of Sewage and Garbage in Foreign Countries; Foreign Trade in Coal Tar and By-Products.

Vol. 18 (1900).—Merchant Marine of Foreign Countries.

Vol. 19 (1900).—Paper in Foreign Countries; Uses of Wood Pulp.

Vol. 20 (1900).—Part I. Book Cloth in Foreign Countries, Market for Ready-Made Clothing in Latin America, Foreign Imports of American Tobacco, and Cigar and Cigarette Industry in Latin America. Part II. School Gardens in Europe. Part III. The Stave Trade in Foreign Countries.

Vol. 21 (1900).—Part I. Foreign Markets for American Coal. Part II. Vehicle Industry in Europe. Part III. Trusts and Trade Combinations in Europe.

Of these SPECIAL CONSULAR REPORTS, Australian Sheep and Wool, Cotton Textiles in Foreign Countries; Disposal of Sewage, etc.; Files in Spanish America, Fire and Building Regulations, Gas in Foreign Countries, India Rubber, Lead and Zinc Mining, Malt and Beer in Spanish America, Port Regulations, Refrigerators and Food Preservation, Soap, etc.; Sericulture, etc.; Vagrancy, etc., are exhausted, and no copies can be supplied by the Department.

There was also published, in 1899, Proclamations and Decrees during the War with Spain, comprising neutrality circulars issued by foreign countries, proclamations by the President, orders of the War and Navy Departments, and war decrees of Spain.

Of the monthly CONSULAR REPORTS, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Bureau will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, the Department will forward franking labels to be used in lieu of postage in the United States, Canada, the Hawaiian Islands, and Mexico.

Persons receiving CONSULAR REPORTS regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to consular reports should be carefully addressed, "Chief, Bureau of Foreign Commerce, Department of State, Washington, U. S. A."

VALUES OF FOREIGN COINS AND CURRENCIES.

The following statements show the valuation of foreign coins, as given by the Director of the United States Mint and published by the Secretary of the Treasury, in compliance with the first section of the act of March 3, 1873, viz: "That the value of foreign coins, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the value of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the 1st day of January by the Secretary of the Treasury."

In compliance with the foregoing provisions of law, annual statements were issued by the Treasury Department, beginning with that issued on January 1, 1874, and ending with that issued on January 1, 1890. Since that date, in compliance with the act of October 1, 1890, these valuation statements have been issued quarterly, beginning with the statement issued on January 1, 1891.

The fact that the market exchange value of foreign coins differs in many instances from that given by the United States Treasury has been repeatedly called to the attention of the Bureau of Foreign Commerce. An explanation of the basis of the quarterly valuations was asked from the United States Director of the Mint, and under date of February 7, 1898, Mr. R. E. Preston made the following statement:

"When a country has the single gold standard, the value of its standard coins is estimated to be that of the number of grains fine of gold in them, 480 grains being reckoned equivalent to $20.67 in United States gold, and a smaller number of grains in proportion. When a country has the double standard, but keeps its full legal-tender silver coins at par with gold, the coins of both gold and silver are calculated on the basis of the gold value.

"The value of the standard coins of countries with the single silver standard is calculated to be that of the average market value of the pure metal they contained during the three months preceding the date of the proclamation of their value in United States gold by the Secretary of the Treasury. The value of the gold coins of silver-standard countries is calculated at that of the pure gold they contain, just as if they had the single gold standard.

"These valuations are used in estimating the values of all foreign merchandise exported to the United States."

The following statements, running from January 1, 1874, to January 1, 1901, have been prepared to assist in computing the values in American money of the trade, prices, values, wages, etc., of and in foreign countries, as given in consular and other reports. The series of years are given so that computations may be made for each year in the proper money values of such year. In hurried computations, the reductions of foreign currencies into American currency, no matter for how many years, are too often made on the bases of latest valuations. All computations of values, trade, wages, prices, etc., of and in the "fluctuating-currency countries" should be made in the values of their currencies in each year up to and including 1896, and in the quarterly valuations thereafter.

To meet typographical requirements, the quotations for the years 1875–1877, 1879–1882, and 1884–1887 are omitted, these years being selected as showing the least fluctuations when compared with years immediately preceding and following.

To save unnecessary repetition, the estimates of valuations are divided into three classes, viz: (A) countries with fixed currencies, (B) countries with fluctuating currencies, and (C) quarterly valuations of fluctuating currencies.

A.—*Countries with fixed currencies.*

The following official (United States Treasury) valuations of foreign coins do not include "rates of exchange."

Countries.	Standard.	Monetary unit.	Value in U.S. gold.	Coins.
Argentine Republic..	Gold and silver..	Peso.....	$0.96,5	Gold—argentine ($4.82,4) and ½ argentine; silver—peso and divisions.
Austria-Hungary*.....	Gold	Crown.....	.20,3	Gold—20 crowns ($4.05,2) and 10 crowns.
Belgium	Gold and silver..	Franc.....	.19,3	Gold—10 and 20 franc pieces; silver—5 francs.
Brazil.....	Gold	Milreis.....	.54,6	Gold—5, 10, and 20 milreis; silver—½, 1, and 2 milreis.
British North America (except Newfoundland).	.....do	Dollar.....	1.00	
British Honduras.....	.....do	.....do	1.00	
Chile.....	.....do	Peso.....	.36,5	Gold—escudo ($1.25), doubloon ($3.65), and condor ($7.30); silver—peso and divisions.
Costa Rica.....	.....do	Colon.....	.46,5	Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centisimos.
Cuba	Gold and silver..	Peso.....	.92,6	Gold—doubloon ($5.01,7); silver—peso (60 cents).
Denmark	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Egypt.....	.....do	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland.....	.....do	Mark.....	.19,3	Gold—10 and 20 marks ($1.93 and $3.85,9).
France	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Gold	Mark.....	.23,8	Gold—5, 10, and 20 marks.
Great Britain.....	.....do	Pound sterling..	4.86,6½	Gold—sovereign (pound sterling) and half sovereign.
Greece.....	Gold and silver..	Drachma.....	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti	.....do	Gourde.....	.96,5	Silver—gourde.
India†.....	Gold	Rupee	.32,4	Gold—sovereign ($4.8665); silver—rupee and divisions.
Italy.....	Gold and silver..	Lira	.19,3	Gold—5, 10, 20, 50, and 100 lire; silver—5 lire.
Japan‡.....	Gold.....	Yen.....	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia	.....do	Dollar.....	1.00	
Netherlands.....	Gold and silver..	Florin	.40,2	Gold—10 florins; silver—½, 1, and 2½ florins.
Newfoundland	Gold	Dollar.....	1.01,4	Gold—$2 ($2.02,7).
Peru§	.....do	Sol	.48,7	Gold—libra ($4.8665); silver—sol and divisions.
Portugal.....	.....do	Milreis.....	1.08	Gold—1, 2, 5, and 10 milreis.
Russia‖.....	.....do	Ruble.....	.51,5	Gold—imperial ($7.718) and ½ imperial ($3.80); silver—¼, ½, and 1 ruble.
Spain.....	Gold and silver..	Peseta.....	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden and Norway.	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Switzerland	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Gold	Piaster.....	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay	.....do	Peso.....	1.03,4	Gold—peso; silver—peso and divisions.
Venezuela.....	Gold and silver..	Bolivar.....	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

* The gold standard went into effect January 1, 1900 (see Commercial Relations, 1899, Vol. II, p. 7). Values are still sometimes expressed in the florin, which is worth 2 crowns.

† For an account of the adoption of the gold standard, see Consular Reports No. 238, p. 359.

‡ Gold standard adopted October 1, 1897. (See Consular Reports No. 201, p. 259.)

§ Gold standard adopted October 13, 1900.

‖ For an account of the adoption of the gold standard, see Review of the World's Commerce, 1896-97, p. 254.

B.—*Countries with fluctuating currencies, 1874–1896.*

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1874.	1878.	1883.	1888.	1889.	1890.
Austria-Hungary*.	Silver	Florin	$0.47,6	$0.45,3	$0.40,1	$0.34,5	$0.33,6	$0.42
Bolivia	do	Dollar until 1880; boliviano thereafter.	.96,5	.96,5	.81,2	.69,9	.68	.85
Central America	do	Peso	.96,5	.91,8		.69,9	.68	.85
China	do	Haikwan tael	1.61					
Colombia	do	Peso	.96,5	.96,5	.81,2	.69,9	.68	.85
Ecuador	do	do	.96,5	.91,8	.81,2	.69,9	.68	.85
Egypt†.	Gold	Pound (100 piasters).		4.97,4	4.90	4.94,3		
India	Silver	Rupee	.45,8	.43,6	.38,6	.32,2	.32,3	.40,4
Japan	Gold	Yen	.99,7	.99,7		.99,7	.99,7	.99,7
	Silver				.87,6	.75,3	.73,4	.91,7
Mexico	do	Dollar	1.04,7½	.99,8	.88,2	.75,9	.73,9	.92,3
Netherlands‡	Gold and Silver.	Florin	.40,5	.38,5				
Peru	Silver	Sol	.92,5	.91,8	.81,2	.69,9	.68	.85
Russia	do	Ruble	.77,17	.73,4	.65	.55,9	.54,4	.68
Tripoli	do	Mahbub of 20 piasters.	.87,09	.82,9	.73,3	.63	.61,4	.76,7

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1891.	1892.	1893.	1894.	1895.	1896.
Austria-Hungary*.	Silver	Florin	$0.38,1	$0.34,1				
Bolivia	do	Boliviano	.77,1	.69,1	$0.61,3	$0.51,6	$0.45,5	$0.49,1
Central America	do	Peso	.77,1	.69,1	.61,3	.51,6	.45,5	.49,1
Colombia	do	do	.77,1	.69,1	.61,3	.51,6	.45,5	.49,1
Ecuador	do	do	.77,1	.69,1	.61,3	.51,6	.45,5	.49,1
India	do	Rupee	.36,6	.32,8	.29,2	.24,5	.21,6	.23,3
Japan	do	Yen	.83,1	.74,5	.66,1	.55,6	.49,1	.52,9
Mexico	do	Dollar	.83,7	.75	.66,6	.56	.49,5	.53,3
Peru	do	Sol	.77,1	.69,1	.61,3	.51,6	.45,5	.49,1
Russia	do	Ruble	.61,7	.55,3	.49,1	.41,3	.36,4	.39,3
Tripoli	do	Mahbub of 20 piasters.	.69,5	.62,3	.55,3	.46,5	.41,1	.44,3

* The silver standard prevailed in Austria-Hungary up to 1892. The law of August 2 of that year (see CONSULAR REPORTS No. 147, p. 623) established the gold standard.

† The Egyptian pound became fixed in value at $4.94,3 in 1887.

‡ The Netherlands florin fluctuated up to the year 1880, when it became fixed at 40.2 cents.

C.—*Quarterly valuations of fluctuating currencies.*

Countries.	Monetary unit.	1898.				1899.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Bolivia	Silver boliviano.	$0.42,4	$0.40,9	$0.41,8	$0.43,6	$0.43,9	$0.43,4	$0.44,3	$0.43,6
Central America.	Silver peso	.41,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3	.43,6
China	Amoy tael	.68,5	.66,2	.67,6	.70,6	.71	.70,2	.71,6	.70,5
	Canton tael	.68,3	.66	.67,4	.70,4	.70,8	.70	.71,4	.70,3
	Chefoo tael	.65,5	.63,3	.64,6	.67,5	.67,9	.67,2	.68,4	.67,4
	Chinkiang tael	.66,9	.64,6	.66	.69	.69,3	.68,6	.69,9	.68,9
	Fuchau tael	.63,4	.61,2	.62,5	.65,3	.65,6	.65	.66,2	.65,2
	Haikwan tael	.69,7	.67,3	.68,8	.71,8	.72,2	.71,4	.72,8	.71,8
	Hankau tael	.64,1	.61,9	.63,2	.66	.66,4	.65,7	.67	.66
	Hongkong tael	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
	Ningpo tael	.64,3	.63	.65	.67,9	.68,2	.67,5	.68,8	.67,8
	Niuchwang tael.	.65,9	.62	.63,4	.66,2	.66,5	.65,9	.67,1	.66,1
	Shanghai tael	.62,6	.60,4	.61,7	.64,5	.64,8	.64,1	.65,4	.64,4
	Swatow tael	.63,3	.61,1	.62,4	.65,2	.65,5	.64,9	.66,1	.65,1
	Takao tael	.66	.66,6	.68	.71	.71,4	.70,7	.72	.71
	Tientsin tael	.66,4	.64,1	.65,5	.68,4	.68,8	.68	.69,4	.68,3
Colombia	Silver peso	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3	.43,6
Ecuador	....do	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3	.43,6
India	Silver rupee†	.20,1	.19,1	.19,9	.20,7	.20,8	.20,6	.21	.20,7
Mexico	Silver dollar	.46	.44,4	.45,4	.47,4	.47,7	.47,2	.48,1	.47,4
Persia	Silver kran	.07,8	.07,5	.07,7	.08	.08,1	.08	.08,2	.08
Peru	Silver sol	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3	.43,6

Countries.	Monetary unit.	1900.				1901.
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.
Bolivia	Silver boliviano.	$0.42,7	$0.43,6	$0.43,8	$0.45,1	$0.46,8
Central America	Silver peso	.42,7	.43,6	.43,8	.45,1	.46,5
China	Amoy tael	.69,1	.70,5	.70,9	.72,9	.75,7
	Canton tael	.68,9	.70,3	.70,7	.72,7	.75,5
	Chefoo tael	.66,1	.67,4	.67,8	.69,7	.72,4
	Chinkiang tael	.67,5	.68,8	.69,3	.71,2	.74
	Fuchau tael	.64	.65,2	.65,6	.67,4	.70,1
	Haikwan tael	.70,3	.71,7	.72,1	.74,2	.77,1
	Hankau tael	.64,7	.65,9	.66,3	.68,2	.70,9
	Hongkong tael	(*)	(*)	(*)	(*)	(*)
	Ningpo tael	.66,5	.67,7	.68,2	.70,1	.72,8
	Niuchwang tael.	.64,8	.66,1	.66,5	.68,4	.71
	Shanghai tael	.63,1	.64,4	.64,8	.66,6	.69,2
	Swatow tael	.63,9	.65,1	.65,5	.67,4	.70
	Takao tael	.69,6	.70,9	.71,4	.73,4	.76,2
	Tientsin tael	.67	.68,3	.68,7	.70,7	.73,4
Colombia	Silver peso	.42,7	.43,6	.43,8	.45,1	.46,8
Ecuador	....do	.42,7	.43,6	.43,8	.45,1	.46,8
India	Silver rupee†	.20,3	.20,7	.20,8	.....	.....
Mexico	Silver dollar	.46,4	.47,3	.47,6	.49,0	.50,9
Persia	Silver kran	.07,9	.08	.08,1	.08,3	.08,6
Peru	Silver sol	.42,7	.43,6	.43,8	.48,7	.....

* The "British dollar" has the same legal value as the Mexican dollar in Hongkong, the Straits Settlements, and Labuan.

† The sovereign is the standard coin of India, but the rupee is the money of account.

FOREIGN WEIGHTS AND MEASURES.

The following table embraces only such weights and measures as are given from time to time in CONSULAR REPORTS and in Commercial Relations:

Foreign weights and measures, with American equivalents.

Denominations.	Where used.	American equivalents.
Almude	Portugal	4.422 gallons.
Ardeb	Egypt	7.6907 bushels.
Are	Metric	0.02471 acre.
Arobe*	Paraguay	25 pounds.
Arratel or libra	Portugal	1.011 pounds.
Arroba (dry)	Argentine Republic	25.3175 pounds.
Do	Brazil	32.38 pounds.
Do	Cuba	25.3664 pounds.
Do	Portugal	32.38 pounds.
Do	Spain	25.36 pounds.
Do	Venezuela	25.4024 pounds
Arroba (liquid)	Cuba, Spain, and Venezuela	4.263 gallons.
Arshine	Russia	28 inches.
Arshine (square)	do	5.44 square feet.
Artel	Morocco	1.12 pounds.
Baril	Argentine Republic and Mexico	20.0787 gallons.
Barrel	Malta (customs)	11.4 gallons.
Do	Spain (raisins)	100 pounds.
Berkovets	Russia	361.12 pounds.
Bongkal	India	832 grains.
Bouw	Sumatra	7,096.5 square meters.
Bu	Japan	0.1 inch.
Butt (wine)	Spain	140 gallons.
Caffiso	Malta	5.4 gallons.
Candy	India (Bombay)	529 pounds.
Do	India (Madras)	500 pounds.
Cantar	Morocco	113 pounds.
Do	Syria (Damascus)	575 pounds.
Do	Turkey	124.7036 pounds.
Cantaro (cantar)	Malta	175 pounds.
Carga	Mexico and Salvador	300 pounds.
Catty	China	1.333⅓ (1⅓) pounds.
Do*	Japan	1.31 pounds.
Do	Java, Siam, and Malacca	1.35 pounds.
Do	Sumatra	2.12 pounds.
Centaro	Central America	4.2631 gallons.
Centner	Bremen and Brunswick	117.5 pounds.
Do	Darmstadt	110.24 pounds.
Do	Denmark and Norway	110.11 pounds.
Do	Nuremberg	112.43 pounds.
Do	Prussia	113.44 pounds.
Do	Sweden	93.7 pounds.
Do	Vienna	123.5 pounds.
Do	Zollverein	110.24 pounds.
Do	Double or metric	220.46 pounds.
Chih	China	14 inches.

*More frequently called "kin." Among merchants in the treaty ports it equals 1.33⅓ pounds avoirdupois.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Coyan	Sarawak	3,098 pounds.
Do	Siam (Koyan)	2,667 pounds.
Cuadra	Argentine Republic	4.2 acres.
Do	Paraguay	78.9 yards.
Do	Paraguay (square)	8.077 square feet.
Do	Uruguay	Nearly 2 acres.
Cubic meter	Metric	35.3 cubic feet.
Cwt. (hundredweight)	British	112 pounds.
Dessiatine	Russia	2.6997 acres.
Do	Spain	1.599 bushels.
Drachme	Greece	Half ounce.
Egyptian weights and measures	(*See* CONSULAR REPORTS No. 144.)	
Fanega (dry)	Central America	1.5745 bushels.
Do	Chile	2.575 bushels.
Do	Cuba	1.599 bushels.
Do	Mexico	1.54728 bushels.
Do	Morocco	Strike fanega, 70 lbs.; full fanega, 118 lbs.
Do	Uruguay (double)	7.776 bushels.
Do	Uruguay (single)	3.888 bushels.
Do	Venezuela	1.599 bushels.
Fanega (liquid)	Spain	16 gallons.
Feddan	Egypt	1.03 acres.
Frail (raisins)	Spain	50 pounds.
Frasco	Argentine Republic	2.5096 quarts.
Do	Mexico	2.5 quarts.
Frasila	Zanzibar	35 pounds.
Fuder	Luxemburg	264.17 gallons.
Garnice	Russian Poland	0.88 gallon.
Gram	Metric	15.432 grains.
Hectare	do	2.471 acres.
Hectoliter:		
Dry	do	2.838 bushels.
Liquid	do	26.417 gallons.
Joch	Austria-Hungary	1.422 acres.
Ken	Japan	6 feet.
Kilogram (kilo)	Metric	2.2046 pounds.
Kilometer	do	0.621376 mile.
Klafter	Russia	216 cubic feet.
Koku	Japan	4.9629 bushels.
Korree	Russia	3.5 bushels.
Kwan	Japan	8.28 pounds.
Last	Belgium and Holland	85.134 bushels.
Do	England (dry malt)	82.52 bushels.
Do	Germany	2 metric tons (4,480 pounds).
Do	Prussia	112.29 bushels.
Do	Russian Poland	113⅜ bushels.
Do	Spain (salt)	4,760 pounds.
League (land)	Paraguay	4,633 acres.
Li	China	2,115 feet.
Libra (pound)	Argentine Republic	1.0127 pounds.
Do	Central America	1.043 pounds.
Do	Chile	1.014 pounds.
Do	Cuba	1.0161 pounds.
Do	Mexico	1.01465 pounds.
Do	Peru	1.0143 pounds.
Do	Portugal	1.011 pounds.
Do	Spain	1.0144 pounds.
Do	Uruguay	1.0143 pounds.
Do	Venezuela	1.0161 pounds.
Liter	Metric	1.0567 quarts.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Livre (pound)	Greece	1.1 pounds.
Do	Guiana	1.0791 pounds.
Load	England (timber)	Square, 50 cubic feet; unhewn, 40 cubic feet; inch planks, 600 superficial feet.
Manzana	Costa Rica	1⅘ acres.
Do	Nicaragua and Salvador	1.727 acres.
Marc	Bolivia	0.507 pound.
Maund	India	82⅔ pounds.
Meter	Metric	39.37 inches.
Mil	Denmark	4.68 miles.
Do	Denmark (geographical)	4.61 miles.
Milla	Nicaragua and Honduras	1.1403 miles.
Morgen	Prussia	0.63 acre.
Oke	Egypt	2.7225 pounds.
Do	Greece	2.84 pounds.
Do	Hungary	3.0817 pounds
Do	Turkey	2.85418 pounds.
Do	Hungary and Wallachia	2.5 pints.
Pic	Egypt	21¼ inches.
Picul	Borneo and Celebes	135.64 pounds.
Do	China, Japan, and Sumatra	133⅓ pounds.
Do	Java	135.1 pounds.
Do	Philippine Islands	137.9 pounds.
Pie	Argentine Republic	0.9478 foot.
Do	Spain	0.91407 foot.
Pik	Turkey	27.9 inches.
Pood	Russia	36.112 pounds.
Pund (pound)	Denmark and Sweden	1.102 pounds.
Quarter	Great Britain	8.252 bushels.
Do	London (coal)	36 bushels.
Quintal	Argentine Republic	101.42 pounds.
Do	Brazil	130.06 pounds.
Do	Castile,* Chile, Mexico, and Peru	101.41 pounds.
Do	Greece	123.2 pounds.
Do	Newfoundland (fish)	112 pounds.
Do	Paraguay	100 pounds.
Do	Syria	125 pounds.
Do	Metric	220.46 pounds.
Rottle	Palestine	6 pounds.
Do	Syria	5¾ pounds.
Sagen	Russia	7 feet.
Salm	Malta	490 pounds.
Se	Japan	0.02451 acres.
Seer	India	1 pound 13 ounces.
Shaku	Japan	11.9305 inches.
Sho	do	1.6 quarts.
Standard (St. Petersburg)	Lumber measure	165 cubic feet.
Stone	British	14 pounds.
Suerte	Uruguay	2,700 cuadras (see cuadra).
Sun	Japan	1.193 inches.
Tael	Cochin China	590.75 grains (troy).
Tan	Japan	0.25 acre.
To	do	2 pecks.
Ton	Space measure	40 cubic feet.
Tonde (cereals)	Denmark	3.94783 bushels.
Tondeland	do	1.36 acres.
Tsubo	Japan	6 feet square.

*Although the metric weights are used officially in Spain, the Castile quintal is employed in commerce in the Peninsula and colonies, save in Catalonia; the Catalan quintal equals 91.71 pounds.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Tsun	China	1.41 inches.
Tunna	Sweden	4.5 bushels.
Tunnland	Sweden	1.22 acres.
Vara	Argentine Republic	34.1208 inches.
Do	Central America	32.87 inches.
Do	Chile and Peru	33.367 inches.
Do	Cuba	33.384 inches.
Do	Curaçao	33.375 inches.
Do	Mexico	33 inches.
Do	Paraguay	34 inches.
Do	Spain	0.914117 yard.
Do	Venezuela	33.384 inches.
Vedro	Russia	2.707 gallons.
Vergees	Isle of Jersey	71.1 square rods.
Verst	Russia	0.663 mile.
Vlocka	Russian Poland	41.98 acres.

METRIC WEIGHTS AND MEASURES.

Metric weights.

Milligram ($\frac{1}{1000}$ gram) equals 0.0154 grain.
Centigram ($\frac{1}{100}$ gram) equals 0.1543 grain.
Decigram ($\frac{1}{10}$ gram) equals 1.5432 grains.
Gram equals 15.432 grains.
Decagram (10 grams) equals 0.3527 ounce.
Hectogram (100 grams) equals 3.5274 ounces.
Kilogram (1,000 grams) equals 2.2046 pounds.
Myriagram (10,000 grams) equals 22.046 pounds.
Quintal (100,000 grams) equals 220.46 pounds.
Millier or tonnea—ton (1,000,000 grams) equals 2,204.6 pounds.

Metric dry measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.061 cubic inch.
Centiliter ($\frac{1}{100}$ liter) equals 0.6102 cubic inch.
Deciliter ($\frac{1}{10}$ liter) equals 6.1022 cubic inches.
Liter equals 0.908 quart.
Decaliter (10 liters) equals 9.08 quarts.
Hectoliter (100 liters) equals 2.838 bushels.
Kiloliter (1,000 liters) equals 1.308 cubic yards.

Metric liquid measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.0388 fluid ounce.
Centiliter ($\frac{1}{100}$ liter) equals 0.338 fluid ounce.
Deciliter ($\frac{1}{10}$ liter) equals 0.845 gill.
Liter equals 1.0567 quarts.
Decaliter (10 liters) equals 2.6418 gallons.
Hectoliter (100 liters) equals 26.417 gallons.
Kiloliter (1,000 liters) equals 264.18 gallons.

Metric measures of length.

Millimeter ($\frac{1}{1000}$ meter) equals 0.0394 inch.
Centimeter ($\frac{1}{100}$ meter) equals 0.3937 inch.
Decimeter ($\frac{1}{10}$ meter) equals 3.937 inches.

Meter equals 39.37 inches.
Decameter (10 meters) equals 393.7 inches.
Hectometer (100 meters) equals 328 feet 1 inch.
Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).
Myriameter (10,000 meters) equals 6.2137 miles.

Metric surface measures.

Centare (1 square meter) equals 1,550 square inches.
Are (100 square meters) equals 119.6 square yards.
Hectare (10,000 square meters) equals 2.471 acres.

CONSULAR REPORTS.

COMMERCE, MANUFACTURES, ETC.

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A GERMAN VIEW OF AMERICAN PROSPERITY.

Under the striking title of "The American danger," the Hamburger Fremdenblatt of December 8 presents on its front page an editorial article, based upon the annual report of the Secretary of the United States Treasury, which is herewith translated as follows:

The statement in the annual report of the finance minister of the United States that the national revenues have increased by $58,500,000 and the expenditures decreased by $117,000,000 merits serious attention. The United States had only a few years ago to struggle with not inconsiderable annual deficits in the national revenues; it has regularly sent abroad—principally to England and Germany—a large part of the interest on national bonds and a considerable share of railway and industrial securities, and has had to make for more than ten years past a yearly appropriation for the pensioners of the war of the rebellion larger than the cost of the German army and navy. The Union has had to meet more recently the heavy cost of the war with Spain, and its industries have to reckon with considerably higher wages and higher rates of interest than the European countries. In spite of all this, the national budget of the United States shows the favorable balance which is announced in the annual report of the Treasury. The reasons for this are made plain by the report itself, from which may be learned much more that is timely and valuable.

We see, for example, from the table of exports and imports that the United States exported during the last (fiscal) year goods valued at $1,394,483,682, of which more than $1,370,000,000 was of domestic origin. In these gigantic figures—one must compare them with the export statistics of European countries to realize their full significance—the item of manufactured goods amounted to 31.54 per cent; that is, nearly a full third of the whole export. To appreciate this fact, it must be remembered that in the year 1898 only 28 per cent, in 1895 only 23 per cent, and in the year 1890 only 17 per cent of the total exports were the products of manufacturing industries. These figures mean more than they alone say. They speak a threatening language; they say clearly and forcibly that the United States, which ten years ago exported more than 80 per cent of agricultural products and less than a fifth of manufactured goods, to-day draws nearly a third—more than 14 per cent

more—of its entire export from the products of its factories. In other words, the Union is marching with gigantic strides toward conversion from an agricultural to an industrial nation.

This will be more apparent if we consider the export statistics of the years 1899 and 1900 from another standpoint. We see that the value of industrial products exported during the fiscal year 1899 was $339,592,146, while that of the fiscal year 1900 was $432,284,366, an increase of a round $100,000,000, or 27 per cent, in a single year. Do not such an enormous increase and the correspondingly rapid progress in productive and selling capacity constitute an imminent danger for all competing nations?

Similarly interesting is also the influence of this development of export trade. The Union came out of the civil war during the early sixties with one of the heaviest national debts recorded in history. This debt was for the most part paid far earlier than the world, or even the Americans, expected, and it was paid mainly by the export of agricultural products. When, about twenty years ago, the industries of the United States began to revive, and under the protection of exorbitant duties developed and strengthened, they suffered in all branches—often seriously—for want of domestic capital. The great transcontinental railways were built partly—in some cases, principally—with foreign—principally English and German—money, and similarly different great industries were obliged to draw capital directly or indirectly from Europe to extend and increase their facilities. The natural result of these conditions was that Europe held a large share of the railway and industrial securities, on which the Union had to pay interest abroad, and, since this interest was payable in gold, there was a strong and constant outflow of the yellow metal, to the injury of the financial situation at home. From this it resulted that during many years the imports from Europe reached higher figures than the exports from the United States, and the resulting adverse balance had to be paid to Europe—likewise in gold. This was the cause of the constant scarcity of money, especially gold, which during the later eighties and the early nineties, in connection with the then unstable financial politics of the Government, repeatedly brought the gold reserve below the legal limit for the protection of the currency and necessitated at that time a new loan and new gold imports and an increase of interest to be paid to Europe. Things went so far that the United States became financially wholly dependent upon Europe, and the rate of interest was practically dictated from London.

From the beginning of the past decade, a series of different factors caused a decided change in this situation. Several unusually good harvests succeeded each other, and two of these, coming in conjunction with bad crops in Russia, changed the balance of trade in favor of the United States and brought a corresponding flow of money to America, instead of from that country to Europe. Numerous industries, among which were many gigantic undertakings, were in part newly established, partly enlarged, through the assistance of the protective tariff on their products. These found, in consequence of the rich harvests and the active building of railways and new industries, an eager market at home and an increased demand abroad. These industries were promoted not only by such favorable conditions, but still more through practical and highly improved processes and the use of labor-saving machinery; as a result of which they were soon able to emancipate themselves wholly from foreign capital and through the strengthening of domestic financial conditions to reduce the rate of interest to a normal figure. As soon as the American industries thus got upon their own footing and were in a position to support the railroads, which were strengthened by increased freights and the gigantic harvests, and were thus brought into a greatly improved financial condition, they likewise undertook the task of freeing themselves from

foreign capital—in other words, of reclaiming the industrial securities which were in European hands; and then, sustained by the protective tariff against foreign competition, they began to dominate foreign markets—first, those of Central and South America, Asia, and Africa, and finally those of Europe. The change in the condition of the United States can best be characterized by the statement that the industries, trade, agriculture, railroads, and finances of the Union each and all climbed, one upon another, through and by each other, steadily upward. And to what a height have they climbed!

The United States, in the year 1899, mined 3,437,210 ounces of gold, valued at $71,053,400, and silver with a bullion value of $32,858,700 and a coinage value of $70,806,626. That raised the specie supply of the Union to $1,034,439,264 in gold and $647,371,630 in silver. Since the total gold and silver coinage of the world during the calendar year 1899 was $466,110,614 in gold and $166,226,964 in silver, and the total money supply of the world on the 1st of January, 1900, was $8,659,900,000 in coin and $2,960,100,000 in paper currency, the United States finds itself in possession of one-fifth of the entire gold and silver money of the civilized world.

If we now turn to an investigation of all the elements which have produced this tremendous, this almost incredible, revolution in the world's situation, it is impossible within our present limits to consider all the factors which are of importance to German interests as well as essential to a comprehensive conclusion. Competent experts, well informed as to the industrial and export conditions which prevail in the United States, have established the following facts:

The steel manufactories of the United States, which two decades ago were in their infancy, to-day control the markets of the world, dictate either directly or indirectly the prices of iron and steel in all countries, and—partly through the richness of their supply of iron ores and coal, partly by the use of labor-saving machinery and skillful, effective means of transportation—have attained a position to not only compete with the older iron-and-steel-producing countries, but even to profitably export their products to England.

American tools, especially hatchets, axes, files, saws, boring implements, etc., enjoy by reason of their excellent quality the best reputation, and, in spite of their higher price, stand above competition in nearly the whole world. Also in sewing machines, bicycles, and agricultural implements of every kind, the United States has begun to drive England and Germany from the world's markets, especially that of Russia, which may be partly attributed to the fact that American firms are protected in their own market from foreign competition and can thus sell their manufactures cheaper abroad than at home.

A remarkable change has also taken place in the field of boot and shoe production. Hardly more than ten years ago the United States imported shoes from Europe—especially women's foot wear from Austria, while other grades were made of leather imported from England and Germany. To-day it not only makes its entire supply of leather at home and exports it in considerable quantities, but it floods Europe with ready-made shoes, competes with the products of cheap labor in England, establishes shoe depots in Paris and even in the principal cities of Germany.

That the United States, by reason of its richness in mineral oils and aided by its unrivaled facilities for refining and transporting this international necessity, controls the petroleum trade of the world and is held in check only by Russia is well known, and the fact is only cited here in order to include this weighty factor in the calculation. The experience of the past few months proves that within a not-far-distant period the coal of the United States will play the same rôle in the markets of the world. The Union has reversed the old adage, "It is ridiculous to carry coals to

Newcastle," for to-day anthracite coals from Pennsylvania are actually exported to England.

Incidentally, it may be remarked that the typewriting machine with which this article is written, as well as the thousands—nay, hundreds of thousands—of others that are in use throughout the world, was made in America; that it stands on an American table, in an office furnished with American desks, bookcases, and chairs, which can not be made in Europe of equal quality, so practical and convenient, for a similar price. The list of such articles, apparently unimportant in themselves, but in their aggregate number and value of the highest significance, could be extended indefinitely. But it would seem more interesting and characteristic to cite the fact that an American syndicate is now planning, and has even taken the initial steps in a scheme, to take in hand the whole sleeping-car service of Europe, to improve it and make it cheaper than is now possible. Moreover, American manufacturers of underclothing, gloves, and men's clothing, as well as women's cloaks—all articles which a few years ago were exported in vast quantities from Europe to the United States—are already beginning to calculate how they can place their surplus output in European markets.

But enough of examples. Everyone who understands the existing conditions and has followed these conclusions, drawn from the best sources and based upon thorough knowledge of the facts, will agree that the threatened danger from America is neither exaggerated nor painted too darkly, but is, in fact, real and serious. But the mere recognition of the peril avails nothing; what is demanded is to face it, to overcome it, or at least to minimize as far as possible its effects. We must ask ourselves whether this is still possible, and, if so, what are the means, the methods, that must be employed to secure a successful result. There is but one answer to this question. We must fight Americanism with its own methods; the battle must be fought with their weapons, and wherever possible their weapons must be bettered and improved by us. Or, to speak with other and more practical words, Germany—Europe—must adopt improved and progressive methods in every department of industry; must use more, and more effective, machinery. Manufacturers as well as merchants must go to America, send thither their assistants and workingmen, not merely to superficially observe the methods there employed, but to study them thoroughly, to adopt them, and wherever possible to improve upon them, just as the Americans have done and are still doing in Europe.

FRANK H. MASON,
Consul-General.

BERLIN, *December 17, 1900.*

AMERICAN ADVERTISEMENTS IN GERMANY.

In compliance with special instructions from the Department of State* I have to report, in respect to the restrictions imposed by certain trade journals in Germany upon the publication of advertisements of American products, as follows:

This movement dates from the year 1896 and was at first directed against American bicycles and bicycle parts and materials, which in that year began to seriously invade the German market. The league of German bicycle manufacturers held several meetings, at which the growing competition of American wheels was earnestly

* Sent at the request of a New York firm, which has received advance copy of the report.

discussed and an organized and determined effort made to secure from the Imperial Government a decree increasing by several hundred per cent the nominal duty on imported bicycles. It will be remembered that when the present German tariff was enacted, bicycles were not an important article of international traffic, and they were not therefore specifically named in the schedule, but have since been classified as "vehicles" at a rate which makes the duty on an American wheel (weighing from 20 to 30 pounds) from 5 to 7 marks ($1.19 to $1.67) only, a rate which naturally imposes no serious obstacle to importations.

Failing to secure any advance in the rate of duty, the Association of German Manufacturers adopted the plan of boycotting, so far as possible, advertisements of American wheels and bicycle parts in the trade publications of this country. There were at that time half a dozen or more papers devoted almost wholly to the bicycle trade, and these were given to understand that they must choose between the patronage of the German bicycle makers and their foreign competitors, especially those of American nationality.

Under this pressure, most if not all the German bicycle publications refused to accept American advertisements, and this restriction is still maintained by the Radwelt (Berlin), the Radmarkt (Bielefeld), and the Deutsche Radfahrerzeitung (published at Essen), none of which, so far as can be ascertained, now accept advertisements of American bicycles or materials.

Several leading German bicycle makers are also manufacturers of sewing machines, and an effort was made to likewise exclude advertisements of American sewing machines from German newspapers, including even the daily press. This movement, however, failed—at least so far as the daily newspapers were concerned. They refused to be bound by any such narrow policy and freely accept advertisements of American products on the same terms as those of native origin. Some of the trade publications which are dependent upon the patronage of the home trade have been compelled to exclude advertisements of American machines, though to what extent this form of boycott has been developed it proves difficult to ascertain.

It will be understood that publications which have been dominated by this movement are of relatively small importance. At the outset, the American bicycle companies which sought to reach this market were undoubtedly delayed and to some extent injured by the exclusion of their advertisements from the trade papers; but they expended their money in sumptuous circulars, catalogues, posters, and other special forms of advertising, which, as they now think, were more effective and attained the desired result.

The manager of a leading American bicycle company which has its wholesale depot at Hamburg and has built up since 1895 a large and permanent trade writes, in reply to a special inquiry on this subject:

We have paid no attention to the cycle papers during the past four years. Five years ago we advertised in the Radwelt and the Radfahrerbundes Zeitung, and at the end of 1896 they refused to take further advertisements from us. We therefore spend the same money on illustrated papers published in Germany and, we think, to much better advantage. In fact, if all those papers should now offer to take our advertisements, I do not think we would accept their offers. A few years ago, this undoubtedly hurt us; but under present conditions of the bicycle business, the trade paper does not have the same influence that it formerly had.

This would appear to describe the present situation correctly in so far as the bicycle trade is concerned.

FRANK H. MASON,
Consul-General.

BERLIN, *December 11, 1900.*

FOREIGN TRADE-MARKS IN GERMANY.

On the 24th of September last, a report was submitted to the Department from this office,* calling the attention of American exporters of manufactured goods to the complications which might arise through the registration and the usurpation of their trade-marks in Germany by unauthorized persons or firms. It was explained that under the very liberal trade-mark statute of this country any person can, upon payment of a nominal fee (30 marks, equal to $7.14), secure the registration in his own name of any trade-mark which has not been previously registered at the imperial bureau, no matter whether the applicant has or has not previously used such trade-mark or has any antecedent or exclusive claim to it.

That report, having been published and copied in Germany, was attacked by a leading Berlin newspaper on the incorrectly assumed ground that it had stated that Americans were unduly discriminated against by the statute in question, and that it gives less protection to American than to native trade-marks, or than is accorded to German trade-marks by the laws of the United States.

What the report did seek to do was to call the attention of American exporters to the fact that, whereas under section 4938 of the Revised Statutes a person or firm claiming protection for a trade-mark in the United States must file a verified statement that the claimant "has the right to the use of the same and that no other person, firm, or corporation has a right to such use," no such proof

* See ADVANCE SHEETS No. 859 (October 13, 1900); CONSULAR REPORTS No. 243 (December, 1900).

or certificate of title is required in Germany; the sole essential condition being that the trade-mark shall not have been previously registered in this country. The report therefore sought to point out the consequent danger which they or any other manufacturer, alien or native, might incur by selling in Germany goods designated by a trade-mark not legally registered in this country. This danger would obviously inhere more especially to foreigners, who might be most naturally ignorant of the ease with which any trade-mark not already protected in this country may be registered, and thereby usurped, by an unauthorized person under the provisions of the German law. That this is true will be fully illustrated by two instances of recent occurrence, as follows:

For several years past the Griffin Manufacturing Company, of New York, has been selling to the German trade through its agents—a German firm in Hamburg—a polishing paste for leather, each box of which bore its duly registered American trade-mark, viz, a "griffin," the fabulous antique monster, with the body of a lion and the head and wings of an eagle. As the Hamburg agents neglected to register this trade-mark in Germany, a certain maker of varnishes and similar goods in Berlin did so in his own name, and then, in April last, warned the Hamburg firm that they must not handle or sell in Germany any more goods bearing the griffin trade-mark without first purchasing his right to do so. As proceedings were threatened to enforce this mandate, the manufacturers in America, not choosing to submit to what they considered a species of blackmail, sought to avoid further complications by devising a new trade-mark for their goods intended for Germany, in which the picture of the animal was omitted and a device substituted consisting of a capital "G" with the legend "Mfg. Co." printed on a scroll across the letter, the whole showing that the preparation was made by the "Griffin Manufacturing Company," of New York. Thereupon the Berlin claimant returned to the attack, declaring that he had obtained exclusive legal right to the word "griffin," and threatening proceedings if any further goods were sold under the name of the Griffin Manufacturing Company. This latter claim is probably untenable, as article 13 of the German statute for the protection of trade-marks clearly provides that no person can be prevented from using his name, the name of his firm, his place of business, etc., either in full or abridged form on his products or on the wrappings or packages which cover or contain the same.

The second instance is technically similar but morally somewhat less aggressive, as the claimant acted under different antecedent conditions. This was a case in which a merchant in Berlin who had several years ago imported, advertised, and introduced a certain

American fruit sirup found that it was being imported and sold by other dealers, and sought to obtain from the makers the exclusive handling of their product for the trade in this country. This being refused, he had the special name of the sirup registered as a trade-mark under the German law, and sought thereby to enforce his claim to exclusive control of its sale to dealers in this country, or, failing in this, to compel the American manufacturers to purchase his claim to their trade-mark. This he felt justified in doing for the reason that he had been instrumental in introducing their product in what had proved a profitable and permanent market.

All these complications may be avoided if Americans or other exporters who seek to introduce into Germany goods protected at home by a trade-mark will request their agents in this country to first register such trade-mark in Berlin. The intent of the German statute is to treat all comers with fairness and equity. Section 23 of that act provides as follows:

> Whoever does not possess an established place of business in Germany, has right to protection under this law only when the government of the country in which his place of business is established offers to German trade-marks, through the provisions of an officially published statute, the same protection that is accorded to trade-marks belonging to its own citizens.
>
> The demand for protection of a trade-mark and for the rights which accrue from its registration in Germany can only be made and maintained by an agent duly established in Germany. The latter—*i. e.*, such duly established agent—is the authorized representative in all proceedings which may be brought under this law before the patent office, and is endowed with all civil rights for the protection of such trade-mark by legal proceedings. For all processes relating to the trade-mark against the person or firm by whom it has been registered, the court of the district in which the agent resides shall have jurisdiction, or, in default of such court in that district, such jurisdiction shall revert to the court of the district in which the patent office is located.
>
> Whoever presents a foreign trade-mark for registration [in Germany] must present with such application proof that protection for such foreign trade-mark has been sought and obtained in the country in which the chief office of the claimant is established. The registration [in Germany] is then authorized—in so far as international treaties do not otherwise specify—only when the trade-mark complies with the requirements of this statute.

On the 22d of September, 1894, an official announcement was published in the Reichsanzeiger (the organ of the Imperial German Government) that German trade-marks receive in the United States the same protection as those of native American citizens, so that from that date the legal status of such property became, as between citizens of the two countries, practically reciprocal.

FRANK H. MASON,
Consul-General.

BERLIN, *December 27, 1900.*

INDUSTRIAL ORGANIZATION IN GERMANY.

At the November meeting of the Manufacturers' Society of the Middle Rhine, Dr. Fuld, LL. D., delivered an address on the organization of industries. The speaker pointed out that the German Government, which during the first half of the nineteenth century was opposed to such movement, has lately become converted to the necessity and advisability of organization. Thus, boards of agriculture have been established in the interests of the farmer and boards of labor in the interests of the workingman; only in the interest of the manufacturers have no boards, as yet, been established. It devolves upon the manufacturers themselves to take the initative in organizing a national industrial council.

The chambers of commerce can not be regarded as representative of manufacturing interests, as with them commerce plays the most important rôle, and they are inclined to advocate the doctrines of free trade, which are by no means shared by the manufacturers.

The speaker urged a strong centralization of industries, as necessary in view of the demands of the agrarian and commercial interests, especially at the present time, during the preparation of new trade treaties.

It appears that the conviction has grown upon the manufacturers that such a centralization would be of immeasurable value to them, and three of the strongest industrial societies of Germany convened to organize a national industrial council. The Imperial Government was apparently in sympathy with the movement, but so far the efforts have failed. Nevertheless, the speaker argued, it must be the constant aim of the manufacturers to call into existence such a central organization. The manufacturing interests of Germany will surely demand the passage of a protective tariff during the present session of the Reichstag.

WALTER SCHUMANN,

MAINZ, *November 26, 1900.* *Consul.*

ECONOMIC PROGRESS OF GERMANY.

The Year Book of the German Maritime Union for 1901 adduces as the most reliable measure of industrial activity in Germany the consumption of coal and iron. The consumption of the former rose during the three years 1896–1898 from 2,153 to 2,276 and 2,352 kilograms (4,747 to 5,018 and 5,185 pounds), and that of the latter from 123 to 134 and 136 kilograms (271 to 295 and 300 pounds) per capita.

The revenue derived by the Kingdom of Prussia from the produce of its forests rose from 70,300,000 marks ($16,731,400) in 1896 to 81,000,000 marks ($19,278,000) in 1898.

The same authority points to the growing consumption of meat, sugar, and beer as an additional sign of economic prosperity. While the average person within the territory of the German tariff union in 1896 still contented himself with a total of 116 liters (123 quarts) of beer, he increased his allowance to 124 liters (131 quarts) in 1898.

The consumption of sugar, which in 1890 was only about 9 kilograms (19.8 pounds) per capita, rose to 11.1 kilograms (22.4 pounds) in 1896 and to 12.4 kilograms (27.3 pounds) in 1898.

The freer use of animal food is shown by the larger revenue derived from the meat tax in various states. Thus, in Saxony this revenue was 4,900,000 marks ($1,166,200) in 1896 and 5,700,000 marks ($1,356,600) in 1898. It increased therefore fully 15 per cent in the space of two years.

FREDK. W. HOSSFELD,

TRIESTE, *November 28, 1900.* *Consul.*

EXHIBITION OF FIRE-PREVENTING APPARATUS IN GERMANY.

The Department has received a note from the German embassy, dated Washington, November 19, 1900, in regard to the international exhibition of appliances for protection and rescue from fire which will be held in Berlin in June and July, 1901.* The executive committee of the exhibition, of which Mr. von Podbielski, Postmaster-General of the Empire, is chairman, would be glad if appliances could be sent from the United States to the largest extent possible. Copies of the programme are sent by the German embassy, with the request that the attention of interested parties be called to the matter. The following extracts from the programme (printed) give details in addition to those already printed on the subject:†

The Berlin fire brigade can, at the commencement of the year 1901, look back upon a period of existence of fifty years. The organization at Berlin has been the means of starting in Germany a new epoch of development in connection with apparatus or means for the extinction of and protection against fire, and thanks is due to such organization and the experience derived therefrom, whereby it has been possible, by increasing the fire-protecting means, to put a check on the dangers threatening in consequence of the rapid development of technics and industry. And, as in Germany, also in other civilized countries such fire-protecting means

*See ADVANCE SHEETS Nos. 803 and 817; CONSULAR REPORTS Nos. 241 and 242 (October and November, 1900).

†For data as to forms of application, etc., see the reports referred to.

have been wonderfully developed during the last few decades for the welfare of mankind.

It is therefore of general interest and earnestly desired that the progress, improvements, and inventions made in connection with fire-protecting and fire-extinguishing apparatus and the like be still more developed, and that the knowledge of these varied and valuable means be more widely spread abroad. Feeling convinced that it will be of considerable advantage for the development of means or apparatus for the extinction of and protection against fire, the committee has decided to open an international exhibition of fire-preventing and fire-saving arrangements in commemoration of the fiftieth anniversary of the organization of the Berlin fire brigade; this exhibition will be held in Berlin during the months of June and July, 1901, at the Place of Military Exercises at Moabit.

Her Majesty the Empress and Queen Auguste Victoria has graciously condescended to accept the protectorate of the exhibition. His Serene Highness Prince of Hohenlohe-Schillingsfürst, Chancellor of the German Empire, has undertaken the honorary presidency.

The object of the exhibition is not only to give manufacturers of every country an opportunity to notify others of the present state of the development of this branch, but also to bring the representatives of the fire brigades of different nations in closer contact with one another. We cordially invite the municipal authorities, fire-brigade associations, national unions, manufacturers, mill owners, and interested parties of every country to compete, and respectfully request the same to energetically promote the object in view, especially by exhibiting suitable apparatus and the like. Then the exhibition and study of the articles sent here will also bring all parties concerned in closer contact with one another and will give a new impulse to technics and also exert a decisive influence upon the fireproof construction of buildings and other plants on water, land, and under ground.

Our exhibition will only consist of selected articles; a jury, composed of parties appointed to represent the different groups, will examine the articles submitted and decide as to their acceptance. Several German federal states have already placed at our disposal or promised state medals and diplomas; moveover, prizes will be given by the exhibition authorities.

We respectfully beg you to render us assistance in carrying out our object and to notify other interested parties thereof.

Detailed Synopsis of the Exhibits.

Group I.—Organization of Fire Brigades.

All kinds of fire brigades are implied: Official, voluntary, obligatory fire brigades; military, municipal, state, and private fire brigades; fire brigades of factories, mines, foundries, ships, etc.

1. Clothing and equipment of the fire brigade.

(*a*) All kinds of clothing, including underwear; special buckles, buttons, cords, materials of plain cloth, coarse unfulled cloth, drills, ticking, linen, lining, woolen underclothing material, water and fire proofing, trousers, cloaks, coats, juppons, jackets, blouses; gloves, such as cloth, leather, kid, riding, driving gloves, etc.

(*b*) All kinds of equipment for light, hard, and fire duty; all kinds of covering for the head, such as helmets, casques, caps, kepis; swords, weapons, and axes belonging to personal equipment; hatchets; signs for functions and attacks, such as cravats, scarfs, shoulder pieces, epaulets, woolen and cotton cords, cords in silver

and gold, galloons in silver and gold, ribbons, rosettes, marks or signs of distinction, association badges, etc.

(*c*) Raw materials ad *a* and *b* (samples of textile fabrics, etc.).

(*d*) Cleaning and keeping in good order the clothing and equipment; lubricating, cleaning, and polishing brushes; beating whips, beating sticks, suspending and supporting appliances, means and methods of preservation, boot grease, blacking, finish, rust-preventing means, means and methods of removing stains, etc.

(*e*) Signaling instruments, flags and standards; janizary musical instruments, signaling horns, drums, fifes, steam whistles, whistles made of willow bark, watchmen's horns, flags for associations and departments, commanders' flags and standards in combination with lamps, etc.

2. Horse equipment.

Harnesses with accessories, bits, reins, saddles, stirrups, straps, buckles, shoeings, riding whips, driving whips, light and heavy rugs, heat and fly protecting devices, protecting straps, protecting caps or boots, horseshoes, protection for hoofs; appliances against slipping, such as pin and screw calkings; rope packings, etc.; hoof grease, hoof tar, shoeing pincers, paring knives, hoof pickers, irrigators, thermometers, horse brushes, currycombs, brushes, dandruff combs, combs, harness brushes and grease, pails, preparatory heaters for water pails, name plates, designations of stalls, horseshoeing, hoof preservation, veterinary appliances, all kinds of stable equipment.

3. Barracks.

Equipment for the firemen's rooms (furniture and decoration), washing apparatus, bathing accommodation, cooking and heating apparatus, places of convenience, stables, wards, coach houses with fittings or equipment, heating, illumination, ventilation, office fittings, cleaning means and cleaning utensils.

4. Apparatus

for extinguishing;
for saving;
for illuminating the way to and the scene of fire and other disasters.

Moreover, the manufacture of the respective appliances, especially of hose and also the weaving of hose, india-rubber and asbestus manufacture; raw materials, such as leather, hemp, flax, cotton, raw asbestus, may be shown.

Then everything appertaining to keeping the apparatus in repair, namely, hose-washing apparatus; apparatus for testing, drying, and repairing hose; cleaning apparatus, cleaning materials and utensils, grease brushes, rags for cleaning purposes; rust-preventing means and polishing material, grease and lubricants for wheels and driving gear, testing apparatus for cords, ladders, safety lamps, breathing apparatus, and fire escapes. Furthermore, all kinds of vehicles for persons and burden, so far as they are not used especially for extinguishing, but serve as means of conveyance for purposes of the fire brigade, namely, for hand and horse draft, such as bicycles or motor vehicles.

Chemical fire-extinguishing substances and extinguishing machinery with constant and nonconstant overpressure, Boucher's fire extinguishers, sulphur cartridges or the like producing nitrogen gas.

5. Water supply.

Water pipes and discharge apparatus, hydrants, slide valves, material; hydrometers or water gauges form the limit. Wells, apparatus for taking water from stagnant and running waters subject to ebb and tide. Apparatus for increasing the

pressure of water supply, preferably by models. Reservoirs in the earth, as collecting receptacles, together with fittings. High reservoirs, water gauges, and regulating devices for the operation of the filling machines; water-pumping stations.

6. Fire intelligence.

Fire-alarm apparatus of every description, such as electric, acoustic, and optical.
Signaling for flat country.
Ascertaining the position of the scene of a fire.

To this group belong certain signaling instruments, the entire apparatus and the building material for electric telegraphy and telephony; for overhead, underground, and subaqueous plants and the transition from one method to the other; and also testing and measuring instruments.

Guns, optical apparatus on towers for characterizing the danger or the position of the same; watchmen's horns and other alarm instruments, fog horns, steam whistles, etc.; intelligence for accidents and danger from water. Apparatus for controlling the duties of the watchman is left for Group IV.

GROUP II.—ASSISTANCE IN CASE OF NEED AND DANGER.

(1) The ambulance crops only comes into consideration so far as it forms a part of the duties of the fire brigade, namely, the apparatus which the fire brigade take with them or possess at their stations, including the corresponding means of conveyance. It is only a question of rendering the first assistance, both by the ambulance attendant and by the physician.

To this class belong medicine chests, antipoison cases, surgeons' dressing cases, and bundles of bandages, stretchers, hospital wagons, litters for the sick, fittings for sanitary rooms.

(2) The above also applies to cases when human beings and animals are in danger and to the conveyance of the same in case of accidents. The following may be specially mentioned: Apparatus for saving persons from drowning in rivers and lakes; rescuing barges, together with equipment, swimming belts, saving cords, anchors, bars; apparatus for rescuing persons from beneath the ice.

Furthermore, dangers from water come into consideration which arise from the swelling of the natural water courses. This applies especially to the protection of dikes, the designation of the places of danger, utensils and material, scoops, picks, sand bags, illuminating apparatus, signaling instruments, etc., arrangements for maintaining traffic in flooded streets by auxiliary or prepared material, supplying those isolated by high water with victuals, rescuing those in danger, and altering the fire-extinguishing apparatus for the flooded districts.

GROUP III.—EXTRAPROFESSIONAL DUTIES.

These duties chiefly refer to the cleaning of streets, to which belong not only the necessary utensils and machines, but also the appliances for removing and utilizing the sweepings and refuse of streets, as also the form and manner of the collection of the latter on the premises; furthermore, disinfecting apparatus and means. For the removal of sweepings and refuse are provided apparatus for the temporary deposit and for the conveyance on land by means of train or automobile carriages, the latter for any way or track, as also by means of freight; furthermore, all machines, etc., necessary for lifting and overloading. The group relating to the cleaning of streets may also include the apparatus for cleaning gutter stones and channels, the construction of the latter and means for the removal of snow. The clothing and equipment of the men, the equipment of the horses and vehicles,

and also everything that belongs to the maintenance and keeping in repair of the barracks, depots, etc., is to be shown here, as in Group I for fire brigades.

GROUP IV.—FIRE PROTECTION.

(*a*) Fireproof structures.
(*b*) Lightning conductors.
(*c*) Heating apparatus.
(*d*) Chimney sweeping, sweepers' clothes, sweepers' apparatus, sweepers' associations, chimney sweepers' teaching establishments, etc.
(*e*) Fire-protecting apparatus—
  (1) For dwellings, schools, hotels, churches, hospitals, asylums, banks, treasuries, safes, etc.
  (2) For factories.
  (3) For warehouses.
  (4) For conveyance on land; on water.
  (5) For mines.
  (6) For electric plants.
(*f*) Theaters.
(*g*) Insurance against fire.

In the subgroup "conveyance" conveying receptacles, lifting and filling apparatus of every description, as also apparatus for vessels for preventing, detecting, and removing danger, will be shown eventually by models. To this group would also belong semaphores and signaling apparatus, although a part of the same, relating to detection and alarm, appears in Group I.

"Mining" must involve safety illuminating, breathing and life-preserving apparatus, damming-up appliances, signaling arrangements, and life-preserving establishments, together with accessories.

The Subgroup IV^e 6 "fire-protecting apparatus for electric plants" is restricted within narrow limits to the fire-protecting apparatus; conducting material, illuminating elements, and driving sources will, however, also be admitted.

The subgroup "theaters" presents per se an important exhibition. In this group will appear a part of Subgroup IV^e 6, and also illumination in case of need, protecting curtains, ventilation, rain apparatus, water posts, extinguishing apparatus, signaling arrangements, decorating material, impregnating materials of every description, saving apparatus, and special constructions in connection with entrances, exits, and gangways; watchmen's controlling apparatus, which, moreover, may already be contained in other subgroups; fittings for house fire brigades; and, finally, models and designs for theaters.

As regards the subgroup "insurance," the following come into consideration: Statistics of every description, especially with regard to compensation for damage caused by fire, the use of the surplus money, the signboards of the companies, diplomas of distinction and medals for services rendered in the line of fire insurance, documentary proof regarding those employed in the fire-insurance branch, etc. In addition to fire insurance, accident insurance and, with regard to horses, cattle insurance are, of course, also included.

GROUP V.—ORGANIZATIONS FOR THE BENEFIT OF FIRE BRIGADES.

(1) Provision (pensions, relief, settlement in favor of survivors) for fire-brigade men already made or that may be made by state and municipal authorities.
(2) Sick, accident, and old-age funds.
(3) Private undertakings, donations, and legacies.
(4) Benevolent funds of fire-brigade associations.

Furthermore, all organizations come into consideration which have for their object the welfare of fire-brigade men still in service, as, for instance—

(1) Society funds.

(2) Sick and relief funds, superannuation funds, burial funds.

(3) Spas and medical establishments for sick fire-brigade men.

(4) Libraries containing light reading; games for those in the barracks.

(5) Reviving means for the fire-brigade men who have become exhausted at the scene of fire.

GROUP VI.—SUBJECTS OF INSTRUCTION, ART, AND LITERATURE.

The subjects of instruction would, in general, have to be classified according to the first four groups. These subjects of instruction involve: Directions and instructions for the fire-brigade men, appliances and apparatus for learning and acquiring bodily exercises and dexterity, gymnastic apparatus, swimming schools, schools for instruction in fire telegraphy, text-books on fire telegraphy, text-books and guides for learning first assistance (together with models), schools for fire brigades, text-books on architecture (together with models), physical instruments for producing vacuum, for illustrating the laws of hydraulics, the statics of fluids, etc.; instruments for measuring electric current, for insulating, and the like; spectral analysis for identifying burning substances, apparatus for ascertaining the flashing point.

The literature would embody all five groups and be classified accordingly.

As regards art, such works on painting and plastics come into consideration which refer more or less to the object or idea of the exhibition and represent as principal or secondary feature fire, light, and rescue from danger caused by fire, floods, or the like. This group would also embody models of monuments to fire-brigade men who have rendered special service or who have sacrificed their lives for others.

As an appendage to this group, arrangements will be made for illustrating interesting scenes of fire by means of plastic panoramas; furthermore, permanent theatrical pieces or performances with varying programmes will be given and a lottery for objects of art established.

It is also intended to extend the programme by a collection of curiosities and historical objects; old extinguishing appliances, peculiarities of scenes of fire and disaster and the like may come under this group.

It is intended to give a series of experimental lectures regarding the different sections of the exhibition and also to arrange congresses of large associations belonging to the various technical industries.

Since exhibitors generally attach special value to the testing of the efficiency of their apparatus, machines, and products, opportunity will be given to animate the exhibition by making tests, without, however, reports or opinions of these tests being made. Fire-brigade horses will also be repeatedly exhibited, in order to show the horse breeders what claims are made by large fire brigades in this respect.

ENGLISH TRADE UNIONS.

The British Board of Trade has just issued a report on the trade unions of the United Kingdom, an abstract of which will be of especial interest to similar organizations in the United States. The number of unions for which comparative statistics of membership are given for the period 1892 to 1899 is 1,685. Some of these unions

were not in existence during the whole of this period, and the number on the list at the end of 1899 was 1,292, compared with 1,218 at the end of 1892. The membership of all the unions at the end of 1899 was 1,802,518, as compared with 1,503,232 at the end of 1892, an increase of 20 per cent in the eight years. During 1899, the total number of trade unions decreased from 1,310 to 1,292. This decline of 18 is due to amalgamation of that number of smaller unions with larger organizations, the number of unions (30) formed during the year being the same as the number dissolved. The total membership, however, of the trade unions rose during the year from 1,649,231 to 1,802,518, an increase of 153,287, or 9 per cent, the greatest proportionate gain in any of the eight years covered by the report. This increase is due to the general rise in the membership of unions of every trade, with the single exception of the unions in the clothing trades, which show a small decrease. The unions which most largely increased their membership during the year were those in the mining and quarrying industries, which showed a gain of 71,084 members, or 20 per cent.

With regard to the sex of members, the returns show that 139 unions included women in their membership, the number being 120,448, or nearly 7 per cent of the total membership of all trade unions and 39 per cent of the membership of the 139 unions which include female members. The bulk of this membership is to be found in the textile trades, which include 109,076, or over 90 per cent of the total number of female trades-unionists. Figures with regard to income, expenditure, etc., of 100 only of the principal unions, with a membership of 1,117,465, show that their funds at the end of the year amounted to £3,282,922 ($15,976,640). The total income was £1,864,006 ($9,060,185). Compared with 1898, the figures show an increase in the funds and total membership, but a decrease in the income and expenditure, the loss in both cases being principally due to the comparative freedom of the year from disputes of any magnitude. The decrease in expenditure in the metal, engineering, and shipbuilding group of trades amounted to no less than £168,612 ($917,880); the expenditure in 1899 being £459,147 ($2,234,439), as compared with £627,759 ($3,054,989) in 1898.

S. C. MCFARLAND,

NOTTINGHAM, *December 21, 1900.* *Consul.*

MERCHANT MARINE OF FRANCE.

The depressed state of the merchant marine of France, and the various measures which have been proposed for its amelioration by parliamentary committees and others interested, have been reported in detail from this consulate.* As supplementary to these reports, I forward a résumé of a valuable and interesting report made by Mr. Thierry, Deputy from Marseilles, in the name of the budget committee of 1900 of the Chamber of Deputies. To this committee had been referred, November 14, 1899, the Government's project for upbuilding the French merchant navy. A copy of Mr. Thierry's report has been recently furnished to each Deputy, and it will form the basis of the discussion which is about to take place in the lower Chamber.

Mr. Thierry, in a broad-minded and clear manner, discusses the problem of bettering the condition of the merchant navy. He makes a number of quotations from Henri Estier's exhaustive report which was made in the name of the extra parliamentary committee.† He analyzes the testimony which was given before the latter commission, especially that of the chambers of commerce of Marseilles, Havre, Dunkirk, Rouen, Honfleur, Nantes, Bordeaux, Syndicate of Shipowners of the North of France, of several of the largest individual shipowners, such as Cyprien Fabre and Henri Bordes, and of the more important shipbuilding concerns. He advocates the diminution of the advantages enjoyed by the sailing fleet under the law of 1893, the increase of bounties granted to steamers, and the rejuvenation of the material composing the merchant fleet. "When the commercial fleet will have obtained a greater number of well-equipped vessels," says Mr. Thierry, "then it will be of the greatest service to the fighting navy when the occasion arises."

Mr. Thierry calls attention to the difficulties which the French Government experienced every time it was necessary to transport troops to Tonkin, Madagascar, Dahomy, and China. He speaks of the great services rendered by English shipowners during the Transvaal campaign. He gives interesting details of the part which our auxiliary fleet took in the naval operations in Cuban waters. In taking the Spanish war as an example, Mr. Thierry establishes that a naval organization should comprise, besides the regular ships

*Annual report of Havre published in Commercial Relations for 1898, Vol. II, pp. 203, 204; ADVANCE SHEETS OF CONSULAR REPORTS No. 201 (August 24, 1898) and No. 350 (February 14, 1899). CONSULAR REPORTS No. 217 (October, 1898), pp. 209–213, and No. 223 (April, 1899); and Special Consular Reports Merchant Marine of Foreign Countries, Vol. XVIII, pp. 16–32.

†A copy of this report was forwarded to the Department and transmitted to the Commissioner of Navigation.

of war and mail steamers transformed into auxiliary cruisers, cargo boats for carrying coal and provisions, cold storage, distillery, hospital, repair, and telegraph ships. He contends that by the organization of a powerful commercial steam fleet, by the transformation of fast steamers into auxiliary cruisers and of cargo boats into auxiliary vessels, the United States applied a system to which, to a great extent, was due the great American success. In other words, instead of having a fixed base of supplies for the fleet, the United States created a movable base.

The budget committee has presented a bill which, while following closely the Government's project, contains several important changes. As this bill will shortly be taken up for discussion by the Chamber of Deputies, I give below a translation:

ARTICLE 1. As a compensation for the burden imposed upon the merchant marine for the recruiting and for service in the military marine (making the former practically a school for seamen who at any time up to the age of forty-five years, or who have not performed twenty-five years of service, can be drafted into the national navy) a shipping bounty (compensation d'armement), with the exceptions hereafter enumerated in article 5, will be paid to all iron or steel seagoing vessels, sailing under the French flag, engaged in the over-sea and international coasting trade, of more than 100 tons gross register, and which are less than twenty years old.

The shipping bounty for steamers is fixed per day when they are in commission, and per gross registered ton, as follows:

	Centimes.	Cents.
For each ton up to 2,000 tons	5	=0.965
For each ton above 2,000 tons and up to 3,000 tons	4	=0.772
For each ton above 3,000 tons	3	=0.579
For each ton above 4,000 tons	2	=0.386

The shipping bounty for sailing vessels is fixed per day that the vessels are in commission, and per gross registered ton, at one-third that allowed for steamers. It is not applicable to sailing vessels of foreign construction.

The number of days for which the shipping bounty will be paid will be limited in the maximum to three hundred days in each year.

The shipping bounty will be paid to all vessels brought under the French flag during the régime of the present law until they have become twenty years old.

The Government bill granted the shipping bounty to all vessels of more than 100 tons and less than twenty years old. The present bill suppresses the bounty for sailing vessels of foreign construction.

ART. 2. In order to develop the maritime industries of France, as a compensation for the charges imposed upon the merchant navy, and for the excessive cost of vessels of French construction, with the exception enumerated in article 5, the navigation bounty (prime de navigation) will be paid to all seagoing vessels built in France measuring over 100 gross tons, less than fifteen years old, and sailing under the French flag.

This bounty is fixed as follows, per 1,000 miles sailed and by gross ton, calculated conformably to articles 1 to 12 of the decree of May 24, 1873, to article 1 of the decree of March 7, 1889, to article 1 of the decree of July 25, 1893, and to modifications which may be made by future decrees.

(*a*) For steamers, the bounty will be 1.70 francs (32.81 cents) for the first year, with an annual decrease, commencing with the date of registration of the vessel, of 4 centimes (0.772 cent) during the first period of five years, of 8 centimes (1.544 cents) during the second period of five years, and of 16 centimes (3.088 cents) during the third and last period of five years.

For steamers measuring more than 3,000 gross tons, the bounty will be diminished 1 centime (0.193 cent) per 100 tons or fraction thereof above 3,000 tons, provided the initial sum will not fall below 1.50 francs (28.95 cents).

(*b*) For sailing vessels, the bounty will be 1.70 francs (32.81 cents) for the first year, with an annual decrease, commencing with the date of registration of the vessel, of 2 centimes (0.386 cent) during the first period of five years, of 4 centimes (0.772 cent) during the second period of five years, and of 8 centimes (1.544 cents) during the third and last period of five years.

For sailing vessels measuring more than 800 gross tons, the bounty will be diminished 10 centimes (1.93 cents) per 100 tons or fraction thereof above 800 tons, provided the initial sum will not fall below 1 franc (19.3 cents).

The navigation bounty will be paid for fifteen years, beginning with the date of registration, to all vessels constructed in France during the régime of the present law.

The number of miles sailed is the distance from port to port, between the points of departure and arrival, measured upon the most direct maritime lines, according to the methods of calculation prescribed by the decree of July 25, 1893, or to any future rules.

ART. 3. The navigation and shipping bounties are not cumulative. The highest only will be paid.

There are no changes in articles 2 and 3, except those necessitated by the provisions of article 5.

ART. 4. Vessels engaged in the international coasting trade will receive the same shipping bounty (compensation d'armement) as over-sea vessels. They will only receive two-thirds of the navigation bounty (prime de navigation) allowed to over-sea vessels, to be calculated as described above.

Ships which, in the same voyage, engage in international coasting trade and also in coasting trade between a French Mediterranean port, including Algeria, and a French ocean port, a French English Channel port, or a French port in the North Sea, or inversely, are entitled to the shipping bounty or to the navigation bounty for the time occupied, or the number of miles sailed, when the vessels are engaged in international trade, provided that the amount of merchandise on board at the time of passing through the Straits of Gibraltar, either going or coming from foreign ports, represents in freight tons one-third of the net tonnage of the vessels.

The bounties will also be allowed to vessels which, in the same voyage, engage in the international coasting trade with a northern European port, or in the coasting trade between ports of France or Algeria, provided that the amount of merchandise on board, when passing through the Straits of Dover (Pas de Calais), going or coming from foreign ports, represents in freight tons one-third at least of the net tonnage of the vessels.

Vessels in going or returning from over-sea voyages which may call at Port Said, Ismailia, or at Suez are entitled to the bounties for the whole distance they may have sailed.

In article 4, the new bill gives the bounties to vessels which, in the same voyage, engage in international coasting trade with a port

in the north of Europe and in the coasting trade between ports of France or of Algeria, if the amount of merchandise on board, when passing through the Straits of Dover, going or coming, represents in freight tons one-third at least of the net tonnage of the vessels.

ART. 5. Are excepted from all participation in the two bounties—

(*a*) Vessels which, after January 1, 1899, shall obtain their French register after they are seven years old.

(*b*) Vessels engaged in deep-sea and coast fishing, pleasure boats and vessels receiving subsidies from the Government other than the bounties given by the present law.

(*c*) Vessels which are engaged, in the same voyages, exclusively in traffic reserved to French vessels; also those which ply only between French and foreign ports which are situated less than 120 miles apart.

(*d*) Vessels engaged in traffic reserved to French vessels which call at foreign ports without discharging or loading merchandise amounting to at least one-third of their net tonnage.

(*e*) Vessels which, from their departure from a French port to their return to a French port, will not have carried merchandise amounting in freight tons to at least one-third of their net tonnage and for at least one-third of the total distance sailed.

The Government bill allowed the bounties to vessels when they were ten years old at the time of being registered under the French flag, while the new bill changes the age to seven years.

ART. 6. Every captain of a vessel receiving one of the bounties provided by article 6 of the law of January 30, 1893, or one of the bounties provided by the present bill, must carry free of charge the dispatches and, in general, all correspondence which may be intrusted to him by the postal service. He will collect or deliver the dispatches at his own expense at the post-offices of the port of departure, of the ports of call, and of the port of destination.

The Thierry bill, in article 6, simply requires the captains of vessels receiving bounties of any kind to carry dispatches and correspondence free of charge. It suppresses the paragraph in the governmental bill which allowed owners of vessels, entering into a contract for at least five years to establish lines of steamers on routes not used by regular lines of mail steamers, to receive an annual fixed subvention equal to the average navigation or shipping bounties which the vessels would have been entitled to for the number of miles sailed.

ART. 7. Articles 5 and 6 and paragraph 3 of article 7 of the law of January 30, 1893, are abolished. The duration of the application of the above provisions, also those of articles 1 to 4 and 7, 8, 9, 10, and 12 of the law of January 30, 1893, is fixed at twenty years, commencing with the promulgation of the present law.

ART. 8. Articles 5 and 6 of the law of June 30, 1893, will remain applicable for the duration of the said law to steamers built of steel or iron, the owners of which claim the benefits of the said article, and to vessels built of wood.

ART. 9. Sailing vessels of French construction, or those which have received a French register, actually sailing under the French flag, and those built in France

on contracts made before the promulgation of the present law, provided that they are registered before January 1, 1903, will remain subject to the provisions of the law of January 30, 1893, for the period established by the said law, if the owners of said vessel claim the benefits of those provisions.

In the Government's bill, the above favor was only granted to sailing vessels constructed or contracted for before November 14, 1899.

ART. 10. When the results of the first voyage made after the promulgation of the decree provided for in article 11 are known, the owners of steamers and sailing vessels should choose between the provisions of the new law and those of the law of January 30, 1893.

A choice having been made, a vessel in future voyages can not come under a different régime.

ART. 11. A decree will determine the conditions under which the present law will be applied, especially the proof which it will be necessary to furnish in order to enjoy the benefits of article 9.

ART. 12. The laws for the registration of vessels in the colonies will be set forth in a decree.

ART. 13. Article 8 of the law of 27th Vendémiaire, Year II, is modified as follows:

French vessels, under the penalty of being considered as foreign vessels, can not repair their hulls or make general repairs in a foreign country if the expenses of such repairs shall exceed 30 francs ($5.79) per ton of the total gross tonnage, unless the necessity for the repairs exceeding the above sum shall be stated in a report signed and affirmed by the captain and other officers of the ship and verified and approved by the consul or other officer of France, or by two French merchants residing in the foreign country, and the report deposited in the maritime office of the French port to which the vessel shall return.

ART. 14. For the application of article 2 of the law of January 30, 1893, the total gross tonnage will be calculated conformably to articles 1 to 12 of the decree of May 24, 1873, to article 1 of the decree of March 7, 1889, to article 1 of the decree of July 25, 1893, and to the modifications which may be made by future decrees.

ART. 15. Decrees issued upon the recommendation of the Ministers of Commerce, of Industry, of Post-Office and Telegraph, after an investigation, and by the advice of the Ministers of Public Works and of Finance, can establish in a maritime port local temporary dues to insure the payment of loans contracted, or of subventions granted by a Department, a commune, or a chamber of commerce, or other public establishments, for the purpose of establishing, of ameliorating, or renewing harbor facilities of this port and its approaches, or for the maintenance of the depths of water of its harbors, passes, canals, and basins.

These dues are established according—

First. To the legal net or gross tonnage of the vessels, whether French or foreign.

Second. To the amount of merchandise loaded or unloaded.

Third. To the number of passengers embarked or disembarked.

They can not exceed—

First. One franc (19.3 cents) per legal net ton of vessels, whether sail or steam, or 85 centimes (16.405 cents) per legal gross ton of steamers, or 60 centimes (11.58 cents) per legal gross ton of sailing vessels.

Second. Fifty centimes (9.65 cents) per freight or metric ton of merchandise, or 10 centimes (1.93 cents) for packages.

Third. One franc (19.3 cents) per passenger. They are payable by the ship. Nevertheless, a decree establishing these dues upon the basis of the quantity of merchandise or of the number of passengers can stipulate that they will be payable by the consignees, or shippers of the merchandise, or by the passengers.

The tariff of rates can include dues levied by ton, graduated according to the kind of vessel, its draft of water, the length of its stay in a port, the kind of navigation, the distance of the country, the nature of the cargo, and to the operations performed by the vessel during a call in the port. The tariff of rates can include reduced dues, or partial or total exemptions from the payment of dues for certain classes of vessels, whether French or foreign.

The tariff of rates established conformably to the present article, or similar dues already in force, can be modified with or without conditions within the limits fixed by the decrees or laws which have established the dues, upon the request of the chambers of commerce, or other public bodies, at whose instance the dues were instituted.

The tariff of rates can only be enforced after having been publicly advertised for one month, and after having been approved by the Minister of Commerce, with the advice of the Ministers of Public Works and of Finance.

The rules governing the form of declaration to be made, the manner of collection, especially the collection by processes of law, the methods of prevention of fraud, the rules of procedure in case of protest against the application of the tariff which are now in force for the collection of customs duties will be applied to the local dues.

Every violation of the rules will be punished by a fine equal to double the amount of dues involved. The costs of collection and of processes of law are deducted from the revenue arising from the dues.

The conditions under which the present article will be applied will be determined by decrees.

ART. 16. Paragraph 3 of article 4 of the law of May 19, 1866, and article 11 of the law of January 30, 1893, relative to local dues of maritime ports, are abolished.

For the benefit of those who wish to study the details of Mr. Thierry's report, I am forwarding to the Department a copy which, through the courtesy of Mr. Louis J. Brindeau, Deputy from the Seine Inférieure, I have been able to procure at this early date.

A. M. THACKARA,

HAVRE, *December 7, 1900.* *Consul.*

ELECTRIC LIGHTING FOR RAILWAY CARS IN GERMANY.

The recent deplorable railway accident at Offenbach-on-Main has led to a sharp and thorough inquiry into the danger which may attach to the illumination of railway passenger cars by means of gas and the greater comparative safety of electric lighting. The accident referred to was a collision between the rear car of a vestibule express train backing to repass a block signal which had been overrun

in a thick fog and the engine of a local passenger train which was following the express. The engine crushed its way through nearly half the length of the car, killing many of the passengers in the five rear compartments, of which the car comprised ten, all opening into an aisle or passageway along the side of the carriage.

In this crush, the chimney of the engine was cut away and the front of the boiler so broken in that the smoke and flame from the flues poured out into the wrecked car.

The passengers in the front sections of the car escaped by the door and windows; but before aid could reach the survivors in the rear ones there was a loud and powerful explosion, which tore the wreck to splinters, set the interior on fire, and sealed the fate of those who still remained alive. This was the original and generally accepted account of the affair, although the railway officials have claimed, and the official report tacitly admits, that the explosion occurred later and when the whole interior of the wrecked car had been set on fire by the engine and was all ablaze, the point of contention being that the explosion did not of itself increase the loss of life.

However this may have been, the explosion did occur, and its nature and origin are thus explained: The car was lighted by what is known as the Pintsch system, and the supply of gas was carried in two cylinders of galvanized-iron plate about 12 feet in length which hung lengthwise beneath the floor at the middle of the car. In the collision, both these cylinders were torn loose from their fastenings and thrown into transverse positions across the track, still beneath the car. Neither cylinder exploded, but the gas from their torn connections rushed out and filled the car above, forming in a few moments a mixture of gas and air which, being ignited by fire from the engine, exploded, with the result above described.

The question of the moment is whether the Pintsch system of gas lighting for passenger cars, which has been during recent years practically universal on the State railways of Prussia, should not be replaced by electric apparatus, and this theme the technical press is now discussing with great energy and earnestness. Under this system, rich coal gas, rendered still more luminous by a 25 per cent admixture of acetylene gas, is compressed into cylindrical reservoirs and burned in specially devised lamps by burners which automatically adapt the flame to the varying pressure in the cylinders. In itself this enriched gas is not explosive, but it naturally forms an explosive mixture when combined with a certain percentage of atmospheric air. The system has been recognized as a great improvement over the stearin candles, colza oil, kerosene, and other lamps which had been previously used, and was regarded as satisfactory

until electric lighting came into general use in streets and buildings. About ten years ago experiments were begun on the express trains, Frankfurt-Bebra and Stuttgart-Halle, with an electric system in which a small dynamo, placed in the baggage car and geared to an axle of the running gear, generated electric current at a voltage sufficiently above the point of utility to give a surplus which charged a small storage battery that supplied the lamps when the train was not in motion. This worked so satisfactorily that in 1893 electric lights were adopted for the postal cars, of which there are about three thousand in use in this country.

A postal car requires for ordinary service the illumination afforded by about fourteen full gaslights, which latter not only consumed rapidly the oxygen in the car, but in summer heated it to such a degree that what with heat, vitiated air, and varying light supply the comfort, health, and eyesight of the employees were seriously compromised. For this reason, the electric light has become all but universal in the postal cars of Germany, each of which either carries its small dynamo and accumulator, and thus operates independently, or is provided with storage batteries that are charged from an outside source before the car begins its journey. The storage battery used for this purpose is of a type known as the Böse accumulator, four of which, each containing eight cells, carry sufficient energy to supply nine to eleven 12-candle incandescent lights during two nights.

Although this system, as well as the self-generating apparatus used in the two express trains above cited, has worked satisfactorily, it is recognized that the general substitution of electricity for gas in railway lighting throughout Prussia would involve not only large expenditures, but several important technical difficulties. To discard wholly the Pintsch system would mean throwing away an immense store of costly apparatus and the purchase of an entire new outfit, in which no part of the old material could be used. During the period of transition, when part of the cars in a train would be equipped with gas and part with electricity, difficulties would occur which would be especially serious in Germany, where so many trains do not make their entire run intact, but are cut into sections for branch lines at one point and reassembled or added to at another. In the management of postal cars, which are loaded at the point of departure and make a uniform through run without change, the loading and unloading of charged and exhausted storage batteries involves no difficulty, but this is not the case with passenger cars.

Experiments are now being made on a train between Berlin and Cologne with the Stone system of electric lighting, in which each car carries a small dynamo geared to a wheel axle and an accumulator,

both hung beneath the floor of the car. This system has proved successful in England; but it is claimed here that the varying speed and stoppages of the train causes variations and unsteadiness in the light, which the accumulator does not successfully correct. Finally, the instances where gas has proved a source of actual danger in accidents have been so rare and its use has been on the whole so satisfactory that, in view of the cost and technical difficulties which a general substitution of electrical lighting would involve, expert opinion is still divided as to the wisdom or necessity of such a change.

FRANK H. MASON,
Consul-General.

BERLIN, *December 14, 1900.*

ELECTRICAL WORKS IN AMSTERDAM.

The city council of Amsterdam has voted 6,000,000 guilders ($2,412,000) for an electric plant which is to furnish power for street cars, lighting, etc., in the city.

It is gratifying to state that prospects seem fair for part at least of the supplies required to come from the United States. The establishment of the plant will mark an epoch in Amsterdam's progress, and the sum voted is large enough to provoke zeal in attempting to secure the work.

I inclose full statement, in translation, of the estimates of cost and receipts of the plant, made by Mr. A. W. Ressing, director of the municipal electrical works of this city, as follows:

Cost of establishing an electric plant to furnish electricity for street cars, lighting, and motive power at Amsterdam.

	Florins.	
Ground surface (1,000 square meters at 25 florins), taking down sheds, and filling of canals	300,000=	$120,600
Buildings, engine room and boiler room for 8 engines of 1,000 horsepower, and 20 boilers of 200 square meters, inclusive of foundations, coal-storage place, chimneys, working steads, warehouses, and laboratory	750,000=	301,500
Central station, 6 compound steam engines of normal 800 horsepower, maximal 1,000 horsepower, at 90 revolutions per minute and 10 atmospheres pressure, inclusive of surface condenser, at 75,000 florins	450,000=	180,900
Six dynamos of 650 kilowatt, at 40,000 florins	240,000=	96,480
Fifteen combined Cornwall boilers of 200 square meters heating surface and for 11 atmospheres pressure, inclusive of foundations, at 12,000 florins	180,000=	72,360
Pipe conduits for water and steam, pumps, etc	80,000=	32,160
Central continuous current for the dynamos, including switches	24,000=	9,648
Switchboard with apparatuses for the large dynamos and for the feeding cables, inclusive of connecting cables between dynamos and switchboard	40,000=	16,080

	Florins.	
Crane of 25,000 kilograms carrying power, inclusive of rails...	12, 000=	$4, 824
Lighting of the central station, necessaries for operating, duplicates, fixing of working stead and laboratory.....	24, 000=	9, 648
Total	1, 050, 000=	422, 100
Conduits for the street cars:		
Overhead conduits, pillars, and rail connections for the existing track of 30 kilometers length, exclusive of rails and street cars, at 15,000 florins per kilometer.....	450, 000=	180, 900
Cables for the projected track, estimated at.....	450, 000=	180, 900
Total	900, 000=	361, 800
Cables for lighting and motive power:		
Feeding cables and transformers for an equivalent of 25,000 lamps, estimated at 40 florins per lamp.....	1, 000, 000=	402, 000
Electricity meters	2, 100, 000=	844, 200
Total	4, 000, 000=	1, 608, 000

whereof 1,838,000 florins ($738,876) for the street cars and 2,162,000 florins ($869,-124) for the lighting and motive power.

Estimate of the return on the capital invested in the electrical work.

EXPENSES.

	Florins.	
Interest on a capital of 4,000,000 florins at 4 per cent.....	160, 000=	$64, 320
Writing off:	Florins.	
Buildings, 750,000 florins at 2 per cent.....	15, 000	
Central station, 1,050,000 florins—		
For the street cars, 513,000 florins at 8 per cent.....	41, 040	
For lighting and motive power, 537,000 florins at 6 per cent.....	32, 220	
Conduits, street cars, 450,000 florins at 5 per cent..	22, 500	
Cables, street cars, 350,000 florins at 3 per cent...	10, 500	
Cables, lighting and motive power, 1,000,000 florins at 3 per cent.....	30, 000	
Electricity meters, 100,000 florins at 10 per cent...	10, 000	
	161, 260=	64, 827
Coal, for furnishing electricity to the street cars, 4,000,000 kilowatt hours; for lighting and motive power, 2,000,000 kilowatt hours; total, 6,000,000 kilowatt hours at 2 kilograms coal per kilowatt hour, equal to 12,000,000 kilograms coal at 100 florins per 10,000 kilograms.....	120, 000=	48, 240
Oil and cleaning material, 10 per cent of amount of coal.....	12, 000=	4, 824
Repairing:	Florins.	
Buildings	2, 000	
Establishment central station.....	12, 000	
Conduits, street cars.....	8, 000	
Cables, street cars.....	2, 000	
Cables for lighting and motive power.....	10, 000	
Electricity meters.....	2, 000	
	36, 000=	14, 472
Wages, controlling, and management.....	56, 000=	22, 512
Insurance and taxes.....	3, 740=	1, 503
Total expenses.....	554, 000=	222, 708

The share of the street cars in the total expenses will be:

	Florins.	Florins.	
Interest on capital, 1,838,000 florins at 4 per cent		73,520=	$29,555
Writing off:	Florins.		
Buildings, 375,000 florins at 4 per cent	7,500		
Establishment of central station, 513,000 florins at 8 per cent	41,040		
Conduits, 450,000 florins at 5 per cent	22,500		
Cables, 350,000 florins at 3 per cent	10,500		
		81,540=	32,779
Exploitation expenses of electricity:			
Coal	120,000		
Oil and cleaning material	12,000		
Repairing of buildings	2,000		
Repairing of central station	12,000		
Wages, controlling, and management	56,000		
Insurance and taxes	8,740		
Total	210,740		
Whereof two-thirds for account of the street cars		140,500=	56,481
Repairing of conduits and cables:			
Repairing of conduits	8,000		
Repairing of cables	2,000		
		10,000=	4,020
Total		305,560=	122,835

RECEIPTS.

The receipts are accounted for as follows:

Furnishing electricity to the street cars, 4,000,000 kilowatt hours, measured at the central station, at 8 cents	320,000=	128,640
Furnishing electricity for lighting and motive power, 1,500,000 kilowatt hours, measured at the electricity meters, at an average price of 20 cents	300,000=	120,600
Rent of meters, 1,000 at 1 florin per month	12,000=	4,824
Total	632,000=	254,064
Total receipts	632,000=	254,064
Total expenses	554,000=	222,708
Net profit	78,000=	31,356

Being about 2 per cent of the capital.

FRANK D. HILL,
Consul.

AMSTERDAM, *December 12, 1900.*

COST OF ELECTRICAL WORKS IN EUROPE.

Consul Hill sends from Amsterdam, December 12, 1900, a comparative table of the cost of electrical works in different cities on the continent of Europe, as follows:

City.	Opening of electrical works.	Horse-power, inclusive of reserve.	Kilowatts connected on December 31, 1898.	Foundations, buildings, and chimneys.	Lighting, cranes, heating, coal transportation, tools, etc.	Boilers, feeding pumps, condensers, conduits, engines, apparatuses, etc.	Accumulators and transformers.
Vienna	Nov., 1890	11,500	11,545	.....	.....	.....	.....
Hamburg	Dec., 1891	3,600	3,902	$95,534	$9,408	$302,599	$86,958
	Nov., 1895	7,200	2,339	327,675	9,567	647,677	60,918
Frankfort	Oct., 1894	4,500	4,594	213,307	252,920	(*)	48,163
Dresden	Dec., 1895	3,840	4,493	140,949	7,507	186,991	29,905
Budapest	Oct., 1893	4,500	4,272	240,106	9,489	392,382	214,731
Leipzig	Sept., 1895	3,000	3,638	61,980	10,661	203,705	52,451
Nuremberg	May, 1896	4,000	3,405	171,927	9,744	161,966	71,371
Cologne	Oct., 1891	2,750	2,745	.....	.....	.....	.....
Stuttgart	May, 1891	2,200	2,704	78,653	6,033	212,349	56,251
Hanover	Mar., 1891	2,800	2,596	175,799	9,269	159,712	54,272
Christiania	Dec., 1892	1,900	1,906	80,211	13,776	149,557	31,583
Darmstadt	Mar., 1889	1,575	1,334	82,357	133,677	(*)	11,857
Chemnitz	July, 1894	1,800	1,457	47,856	(†)	126,881	247,109
Amsterdam:							
Electric	July, 1892	3,100	1,550	245,371	377,774	(*)	410,269
Municipal electrical works	.....	3,000	3,000	211,050	215,874	(*)	402,000

City.	Cables and house connections.	Electricity meters.	Sundry expenses, principally supervision during course of building.	Total.	Cost per horse-power.	Cost per kilowatt connected.
Vienna	.....	.....	.....	$3,015,000	$262	$261
Hamburg	$1,425,134	$62,630	.....	3,088,401	286	.....
Frankfort	287,982	48,729	$51,005	934,268	207	203
Dresden	406,858	31,014	27,255	830,481	216	185
Budapest	397,893	71,618	.....	1,326,310	294	310
Leipzig	425,182	43,455	6,607	804,042	268	221
Nuremberg	223,761	56,127	44,139	739,037	185	217
Cologne	.....	.....	.....	649,324	236	237
Stuttgart	324,893	49,681	.....	727,861	331	269
Hanover	288,720	36,396	25,914	750,855	268	289
Christiania	114,325	26,633	20,998	437,082	230	229
Darmstadt	101,764	13,551	1,588	344,797	219	258
Chemnitz	(‡)	15,540	2,417	439,804	273	302
Amsterdam:						
Electric	(‡)	.....	.....	1,033,414	333	677
Municipal electrical works	(‡)	40,200	.....	869,124	290	290

* Included in lighting. † Included in foundations. ‡ Included in accumulators.

PROPOSED ELECTRIC RAILWAY FOR LEICESTER.

The tramways subcommittee of the Leicester corporation has issued a lengthy report upon its investigation of the different systems of tramway traction in operation in various cities and towns of Great Britain, together with a number of important recommendations. The committee has come to the conclusion that the overhead-trolley system of electric traction is the most efficient, reliable, quick, and economical system extant, and therefore recommends its adoption in Leicester, following the purchase of the present tramway company's undertaking. The scheme which is outlined in the committee's report involves the reconstruction of existing tramway lines and their extension to various points on the outskirts of the borough. It also recommends the adoption of the continuous direct-current system of generating plant, with a central power station situated on land already belonging to the corporation. If the scheme should be approved by the town council, parliamentary powers will be sought for carrying out the various works involved, which will include the laying of 18 miles of double lines in the borough. The report will be brought before the council for consideration at an early date.

S. C. McFARLAND,

NOTTINGHAM, *December 17, 1900.* *Consul.*

NEW SPANISH RAILWAY.

As illustrating the effort now being made in Spain to meet the prevailing high cost of coal by pushing the development of the native mines, a brief account of the proposed new railway from Saragossa to Utrillas may be of interest, and at the same time assist United States manufacturers who desire to tender bids for the required material.

Utrillas lies about 70 miles south of the city of Saragossa, in the hilly district of the province of Teruel. It has long been known for its collieries, but these, owing to the lack of transportation—which made competition with Welsh coal impossible—have never been properly worked.

The length of the proposed new line is about 77 miles, 40 miles of which will run over smooth ground, offering no difficulty or special expense of construction; 20 miles will be through a somewhat hilly but easy country, and the remainder through a difficult region. In the construction of the last 17 miles, there will be required one straight tunnel, not far from Saragossa, 480 yards long (the only one

on the line); and three bridges—one near the tunnel, 56 yards in length and 81 feet in height at the deepest point, another of the same dimensions on the border of the provinces of Saragossa and Teruel, and the third, the most important, at Belchite, with a length of 122 yards and a maximum elevation of 130 feet. The bridges will all be of masonry, owing to the proximity of good stone quarries.

With so few engineering difficulties to overcome, the cost of the line will not be great, even in the hilly section, the narrow 1-meter gauge (3.28 feet) allowing many tunnels to be dispensed with.

The line throughout is planned as economically as possible, with due regard to perfect construction and the most modern improvements.

The steel rails are to weigh 30 kilograms (66.165 pounds) per lineal meter (3.28 feet), laid on wooden sleepers that are already being prepared in the pine forest purchased for that purpose by the company.

The locomotives are to be compound, weighing 40 tons, with an average speed of about 22 miles an hour.

The primary object of the line being the transportation of freight, the rolling stock will be chiefly devoted to that purpose. There are to be ten stations on the line, and it is intended to provide the depot at Saragossa with every facility for rapid loading and unloading.

All communications should be addressed to Mr. Mariano Baselga, Saragossa, Spain.

MADDIN SUMMERS,
Vice and Deputy Consul-General.

BARCELONA, *December 14, 1900.*

SUGAR INDUSTRY IN SPAIN.

Since the West Indian colonies were lost the production of beet sugar in Spain has almost monopolized the attention of Spanish agriculturists. Large capital has been subscribed for the purpose of cultivating beets on an extensive scale and of erecting sugar mills throughout the country. The result has already been a considerable overproduction and a consequent uneasy feeling in the trade.

During last year, about 79,000 tons of sugar were produced in this country, 30,000 tons of which were contributed by 22 cane-sugar mills and 49,000 tons formed the output of 26 beet-sugar works, only 16 of which were completed in time to avail themselves of the entire crop. Twenty-two more beet-sugar mills are now either built or building; of these 16 will work this season's crop and the others will be ready by next year. The total number of beet-sugar mills in Spain will then be 48.

At a meeting of the manufacturers held recently, it was stated that the beet-sugar mills already working and those in course of construction will represent a daily capacity of 16,000 tons, which, if one hundred days be taken as the average duration of the season and the proportion of sugar extracted be calculated at over 10 per cent, would mean an output of 160,000 tons of sugar, or rather more than double the actual requirements for home consumption. This year alone, about 897,000 tons of beet root have been contracted for, which will yield some 90,000 tons of sugar; adding to this amount the 30,000 tons of cane sugar, we obtain a total of 120,000 tons of sugar, or a surplus of 40,000 tons. The question as to whether this surplus production can be advantageously exported without the help of Government bounties is engaging serious attention, as it is argued that even by the help of the same bounties as are granted in other countries Spanish sugar could not compete in a foreign market.

The following are some of the reasons given why Spanish sugar can not be profitably exported:

The average yield of Spanish-grown beet root should be from 12 to 13 per cent, whereas at present only the Andalusian beet root gives this return. A hectare (about 2½ acres) of ground ought to produce some 32 to 36 tons of rich beet root, making between 20 and 30 pesetas ($3 to $4) per ton, or, say, about 2.50 pesetas (38 cents) per degree of saccharine richness.

The factories have mostly an expensive staff of foreign foremen and overlookers, who are paid high salaries during the whole year for only three months' work. The cultivation of beet root requires to be improved; selected seeds should be grown and special fields devoted to their cultivation under careful supervision, and finally it should be possible to supply sugar for export at the cost price of 35 pesetas per 100 kilograms (about $2.50 per cwt.), in which case it is said that bounties such as those given by Germany or Belgium might result in a foreign sugar trade.

JULIUS G. LAY,
Consul-General.

BARCELONA, *November 22, 1900.*

CHESTNUT CULTIVATON IN FRANCE.

The business of growing chestnuts and preparing them for the market is very extensively carried on in France, and, as Lyons is the center of this industry, I send the results of my investigations to the Department, believing it to be a subject of very general interest.

Many varieties of chestnuts are grown in a number of Departments in France. They are called in French "marrons" and

"chataignes." The latter is the smaller and the less desirable of the two. There is one undivided meat in the shell of the marron, while the chataigne is divided into a number of pieces, and each piece is enveloped in an epiderm, which does not exist in the marron. The marron is cultivated only by grafting, while the chataigne grows wild. Among the different varieties are:

Chataignes des Bois (wild chestnuts); small, of but little savor, large trees, wood prized for building.

Chataignes Ordinaires; a little larger and better than the former.

The Yellow Spring; early, very precocious.

Exalade; the best of all; trees very productive, but soon exhausted.

The Pealone; large chataigne, good eating fruit, epiderm easily removed.

The best marrons are those known as the "Marrons de Lyon." The fruit is large, almost round, the shell thin, and epiderm light.

The Dauphinoise; large, round meat.

The Nougillarde; meat delicious.

The Great Red.

The Great Green.

The Partalonne; fruit almost round and clear in color.

The Pelegrine; of medium size and very productive.

The Marron d'Aubray, d'Agen, du Luc; three varieties but slightly differing from one another.

In the Department of Corrèze, the favorite marrons cultivated are: The Early Black, the Early Red, the Early May, the Humineaux, the Humineaux Red, la Matroune, and the Corrèze.

The marron trees only produce well when they are about ten years old. They should be planted about 20 feet apart; some are planted nearer, but they are not good producers.

No one variety can be preserved better than another. They should be consumed while fresh. When dried, they are generally thrashed until the shells fall off, when they are ground into a flour and eaten as food. They can be prevented from becoming dry for some time by being buried in sand. In some places, the chestnuts are preserved by being scattered over a thin framework of willow branches under which there is a slow fire that produces a great deal of smoke and no flame.

Chestnuts now sell at from 14 to 16 francs ($2.70 to $3.09) per 100 kilograms (220 pounds). They will be from 15 to 20 per cent higher within a week.

Plants grafted for the best varieties of chestnut trees can be bought within a few miles of Lyons.

In some parts of France, in what are called the schist lands, chestnuts form a very important article of daily food. They are boiled, pulverized, and eaten like our mashed potatoes. In every city and

nearly every village, during the fall and winter, they are sold in doorways and on street corners fresh from large roasting pans. About noon time, numbers of poor people may be seen around these roasting pans waiting to invest their pennies. Nine or ten chestnuts are given for a cent. They are about the size of our horse-chestnuts.

There are a number of ways of cooking chestnuts: They are roasted on coals, boiled with celery, or roasted in a hermetically sealed earthen pot. They are used in the dressing for turkeys, geese, chickens, and game, and are also served as dessert.

The chestnut occupies a conspicuous place in confectionery. Every confectioner buys them raw and prepares them. The best candied chestnuts cost 45 cents per pound; coated with chocolate, 52½ cents.

There are large establishments all over France where chestnuts are prepared. The principal one in Lyons, owned by Mr. Noguier-Viennois, employs from 225 to 250 hands, chiefly girls and women. It handles over 25,000,000 pounds of chestnuts annually. When I visited these works, the warehouse contained several hundred sacks, each containing 100 kilograms (220 pounds) of chestnuts. In the preparation, the nuts are first peeled and then boiled in clear water, when the "second skin" is removed. They are then placed in a sirup highly perfumed with Mexican vanilla. It is said that this vanilla retains the perfume better than other kinds. The fruit is left three days in this sirup and then set to drain. Afterwards, it is treated to a thin coating of vanilla, packed in pretty boxes, and shipped.

In the warehouse, I saw scores of boxes directed to the different large cities of Europe, to the United States, and to South American countries. The work of preparing chestnuts for the market goes on night and day for three or four months of the year while the fruit is in condition. During the rest of the year, the house is occupied in preserving other fruits.

Chestnuts are grown in Limousin, Perigord, Cevennes, Alpes, Isère, Pyrénées, Ardèche, Var, Auvergne, Sarthe, and in Corsica.

The wood of the chestnut tree is considered valuable for many purposes. It is strong and tenacious and may be subjected for years to the influence of air, wind, or water without decaying. In some places, the trees are cultivated solely for the wood. It inflames easily and produces a great deal of heat, but is considered dangerous as fuel on account of its tendency to throw out sparks. It makes excellent charcoal.

The wood finds many uses in France, the smaller branches for hoops, bread tally sticks (short pieces containing a number of

notches, which mark the loaves of bread sold to a customer), lattice-work, small baskets, supports for vines, ladders, etc.

The tree flowers in France in May and June. No books exist in France on the cultivation of the chestnut. At the principal place in Lyons where such works would be found, they tell me that the chestnut tree requires no especial care, on account of its hardy character, and has not, therefore, been the subject of the horticultural writer. It flourishes in gravelly land, in shale. A calcareous ground is fatal to its growth. In many parts of France, the trees have been planted upon hillsides, because their roots take a tenacious hold of the earth and prevent washouts. Losses from inundations have greatly decreased in the Cevennes since these trees were planted on the mountain slopes of those regions.

There are many places in the United States (along the shores of Lake Erie, near Cleveland, for instance) where the ground is admirably suited for the growth of these trees. As sugar is 50 per cent cheaper in the United States than in France, and as machinery would certainly replace human labor, the American candied product would soon undersell that of France.

JOHN C. COVERT,
Consul.

LYONS, *December 20, 1900.*

FRENCH SILK TRADE.

The imports and exports relating to the silk business of Lyons for the first ten months of the year 1900 have just been published. I give the figures, compared with those for 1898 and 1899:

Imports and exports.	Ten months of—		
	1900.	1899.	1898.
Cocoons:	*Pounds.*	*Pounds.*	*Pounds.*
Imports	994,600	1,684,200	1,651,000
Exports	132,200	121,400	412,400
Remaining in France	862,400	1,562,800	1,238,600
Raw silk:			
Imports	9,335,400	13,676,600	9,750,200
Exports	4,220,400	6,060,800	4,323,400
Remaining in France	5,115,000	7,615,800	5,426,800
Thrown silk:			
Imports	16,200	19,400	55,200
Exports	804,600	688,600	599,000
Waste silk, combed and in bulk:			
Imports	10,870,000	13,054,600	11,683,800
Exports	2,548,400	2,547,000	2,966,800
Remaining in France	8,321,600	10,507,600	8,717,000

It will be seen from the above that the arrivals of cocoons, raw silk, and waste silk were not as large as those of the previous year. The falling off in raw silk is over 4,000,000 pounds. The quantity received from China is about 3,000,000 pounds less than last year. That from Japan has fallen off 50 per cent. Italy and Turkey send 200,000 pounds less of cocoons than in former years.

The importations of waste silk fell off 2,000,000 pounds, the decline being chiefly in shipments from China and Japan.

This is the condition the market here generally assumes about every four years. The purchases were especially heavy last year and heavier than usual the year before. There is enough raw material on hand for some months yet, and there are 12,000 bales of raw silk at Yokohama, Japan, and 20,000 in China. The exports of raw silk were about 2,900,000 pounds less than last year, while the exports of manufactured silk were but a little less than for the two former years, as is shown by the subjoined table:

Exports of tissues.

Description.	Ten months of—		
	1900.	1899.	1898.
Pure silk	$13,205,280	$12,486,960	$12,288,000
Figured silk	531,960	690,060	1,710,580
Mixed goods	15,799,340	16,331,440	12,483,060
Gauzes and crapes	662,500	777,500	1,477,840
Tulles	3,205,300	5,453,300	2,852,000
Laces	3,205,300	3,066,600	4,159,100
Trimmings	593,583	493,960	700,098
Ribbons	6,783,180	6,953,480	5,734,580
Miscellaneous	783,357	1,151,400	907,142
Total	44,769,800	47,405,200	42,312,400

This table shows a falling off of $2,500,000 for the first ten months of 1900 as compared with 1899, but it is an excess over every other year of the decade. An increase in purchases from the United States was noticeable immediately after the late election.

During the last nine months, there was a strong market in the United States and London for mixed silk and fancy goods, gauzes, crapes, and tulles.

The following table shows the destination of the raw silk:

Destination.	Ten months of—		
	1900.	1899.	1898.
England	$19,563,800	$23,575,400	$22,650,400
United States	9,305,800	8,933,800	8,445,600
Germany	3,104,600	3,830,200	3,104,800
Belgium	2,079,400	1,709,200	2,047,200
Switzerland	1,978,000	1,433,400	1,276,600
Italy	510,600	437,600	260,800
Spain	1,046,200	1,816,800	669,400
Turkey	932,400	919,800	792,200
Miscellaneous	6,249,000	4,749,000	3,065,400
Total	44,769,800	47,405,200	42,312,400

The falling off in England is possibly due to the war in the Transvaal. In Germany, it is the result of increased domestic production. A slight increase will be noticed in the sales to the United States, Switzerland, Belgium, Italy, and Turkey.

Lyons is the great center of the manufacture of silk, yet France imported manufactures as follows, during the ten months of the years given:

Description.	Ten months of—		
	1900.	1899.	1898.
Pongee corah tussahs	$2,938,000	$3,528,600	$1,864,840
Plain tussah	2,955,680	3,046,300	2,844,360
Figured silk	38,340	27,980	20,000
Mixed goods	1,177,800	1,099,920	1,150,680
Gauzes and crapes	998,660	1,124,240	1,033,695
Tulles	332,200	481,800	411,400
Trimmings	230,778	247,678	216,468
Ribbons	600,780	260,480	286,840
Miscellaneous	513,762	437,802	339,317
Total	9,786,000	10,254,800	8,167,600

The first article mentioned—pongee corah tussahs—is from China and India. It is printed and dyed in France and goes hence all over the world. The façonné (figured goods) is from Japan, Switzerland, and Italy; the lace, from Belgium and England (Nottingham); the ribbons, from Basel, Switzerland, and Crefeld, Germany.

It will be seen that, notwithstanding the higher protective tariff in France, imports of mixed silk goods and ribbons have greatly increased, while those of lace, crapes, tulles, and trimmings have decreased. The augmentation of the import of ribbons is solely due to the strike at St. Etienne, the center of the manufacture of that article in France.

JOHN C. COVERT,
Consul.

LYONS, *December 1, 1900.*

SILK PRODUCTION OF THE WORLD.

Consul Hughes, of Coburg, under date of December 13, 1900, sends the following table, compiled from statistics issued by the Merchants' Union Silk Syndicate, of Lyons, with regard to the production of raw silk in all the silk-producing countries of the world for the years 1897, 1898, and 1899:

Country.	1897.		1898.		1899.	
Western Europe.	*Kilograms.*	*Pounds.*	*Kilograms.*	*Pounds.*	*Kilograms.*	*Pounds.*
France	620,000	1,366,852	550,000	1,212,530	560,000	1,234,576
Italy	2,916,000	6,428,614	2,992,000	6,596,163	3,363,000	6,814,070
Spain	73,000	160,936	80,000	176,368	78,000	171,959
Austria-Hungary	231,000	509,263	244,000	537,922	276,000	608,470
Total	3,840,000	8,465,665	3,866,000	8,522,983	4,277,000	8,829,075
Levant and Central Asia.						
Anatolia (Brousse)	316,000	696,654	412,000	908,295	486,000	1,071,436
Syria	490,000	1,080,254	465,000	1,025,139	456,000	1,005,298
Salonica (Andrianople)	115,000	253,529	165,000	363,759	210,000	462,966
Balkans (Bulgaria)	37,000	81,570	34,000	74,956	42,000	92,593
Greece	43,000	94,798	40,000	88,184	34,000	74,956
Caucasus	240,000	529,104	230,000	507,058	310,000	683,426
Persia and Turkestan (exportations)	105,000	231,483	133,000	293,212	246,000	542,332
Total	1,346,000	2,967,392	1,479,000	3,260,603	1,784,000	3,933,007
Far East.						
China:						
Export from Shanghai	3,295,000	7,264,157	4,650,000	10,251,390	5,455,000	12,026,093
Export from Canton	1,860,000	4,100,556	2,295,000	5,059,557	2,250,000	4,960,350
Japan (export from Yokohama)	3,507,000	7,731,532	3,122,000	6,882,761	3,542,000	7,808,693
India (export from Calcutta)	291,000	641,539	275,000	606,265	350,000	771,610
Total	9,583,000	19,737,784	10,342,000	22,799,973	11,597,000	25,566,746
Grand total	14,769,000	31,170,841	15,687,000	34,583,559	17,658,000	38,328,828

SILK SPINNING IN JAPAN.

Consul-General Bellows, of Yokohama, under date of November 12, 1900, sends the following clipping from the Japan Times of November 11:

In spite of the fact that Japan occupies the foremost rank in silk produce, the silk-spinning industry remains, comparatively speaking, in its infancy. The work was first taken up as a Government enterprise in 1877; but there now exist only nine mills of the kind, all private, and seven of them were established subsequent to 1877. To briefly review the history of this new industry, the pioneer mill was started in 1877 at Shimmachi, Gumma-ken, use being made of the water power available and the help of three foreign experts especially engaged by the Govern-

ment having been secured. Two years later, a number of the shizoku of Mayebashi started a silk mill on their own account, and in 1887 the Government mill was sold to the Mitsui firm, which also got transferred to it, about eight years after, the Mayebashi mill. Meanwhile, another private factory was established in 1887 in Kyoto, and still another near Hodogaya, Kanagawaken, in 1890. All these establishments suffered for awhile considerable reverses, brought about by various causes. In addition to the primary defect that the knowledge of the foreign experts, and hence of those who worked under them, was far from equal to the work to which they applied themselves, ordinary silk ruled low in the market, while the demand for it was as yet comparatively limited both at home and abroad, the public not caring to patronize the spun silk, inferior in quality as it was to ordinary silk and comparatively high in price. It was subsequent to the Japan-China war that the silk mills began for the first time to take breath; for, with the sudden launching of sundry enterprises, a greater consumption of silk, with a consequent advance of its prices, coupled with the fact that the Japanese experts had, in the meanwhile, tolerably well initiated themselves into the practice and theory of the work, the business of silk spinning became for the first time profitable—so much so that the first mill in Kyoto, which has subsequently added to itself another mill, was able to declare a dividend of as much as 40 to 50 per cent. This prosperous condition has given a powerful impetus to the growth of the industry, so that since the war five new mills have made their appearance. Below is given a table of the mills, compiled by Mr. Iwanaga, of the Department of Agriculture and Commerce, in May of this year:

Name.	Locality.	When started.
1. Mitsui Shimmachi Boseki	Shimmachi, Gumma	1877
2. Mitsui Mayebashi Boseki	Kamikawabuchi, Gumma	1879
3. Dai Ichi Kenshi Boseki	Kyoto	1877
4. Nippon Ken-men Boseki	Near Hodogaya	1890
5. Nippon Kenshi Boseki	Kyoto	1895
6. Kyoritsu Kenshi Boseki	Sankai-mura, Okayama	1895
7. Nankai Kenshi Boseki	Nakanojima, Wakayama	1895
8. Fuji Boseki	Suganuma-mura, Shizuoka	1895
9. Koriyama Kenshi Boseki	Koriyama	1898

Name.	Capital.	Paid-up capital.	Spindles.	Operatives.
1. Mitsui Shimmachi Boseki	(*)	(*)	5,460	538
2. Mitsui Mayebashi Boseki	(*)	(*)	720	147
3. Dai Ichi Kenshi Boseki	$249,000	$199,200	8,900	1,030
4. Nippon Ken-men Boseki	186,750	186,750	2,700	477
5. Nippon Kenshi Boseki	498,000	348,600	5,584	730
6. Kyoritsu Kenshi Boseki	498,000	298,800	6,582	796
7. Nankai Kenshi Boseki	224,100	201,475	3,720	725
8. Fuji Boseki	(†)	(†)	5,940	674
9. Koriyama Kenshi Boseki			(‡)	(‡)

*Unknown. †Combines cotton spinning. ‡Not commenced.

No. 3 has borrowed 40,000 yen ($20,000), No. 5 25,000 yen ($12,500), No. 6 100,000 yen ($50,000). The scale of daily wages varies: For the first-rate male operatives, from 36 to 75 sen (18 to 37½ cents) on the average, according to the kinds of work they are to undertake; and the figures for the corresponding female operatives are 20 to 31 sen (10 to 15½ cents).

FRENCH WINE PRODUCTION IN 1900.

According to reports just issued, the wine production of France for the year 1900 is 65,000,000 hectoliters (1,721,000,000 gallons), a yield that has only been exceeded three times during the past century and never in any preceding one hundred years. It is several million hectoliters short of what was expected in midsummer, when the vines, especially in the southern wine fields, bore richer burdens than were ever before seen in France. The heavy rains of the month of September, however, entirely washed away the crop, vines, and roots of thousands of acres in the Midi of France. Milder but continuous rains rotted the grapes or impaired their richness in many other provinces. The farmers, who were very heavy losers by these inundations and frosts, were partially indemnified by the remission of their taxes in proportion to the damages incurred. The indemnity thus provided extends over four years from the date of the destruction of the vines, affording ample time for replanting.

The promise of a large yield was so great in August that sales were made at less than $1 per barrel for good table wine, to be delivered in October, the purchaser to furnish the barrel. From 8 to 20 francs ($1.54 to $3.96) per barrel of 110 quarts of very fair wine have been the ruling quotations for the year. The high brands are unusually rich this year, and the prices are low, ranging from $50 to $150 per barrel of about 240 quarts.

Since early in the seventies up to 1900, there has been a great demand for American plants for grafting upon French vines. In 1881 the total replanted with American vines was 21,262 acres. In 1889 it was 471,000 acres and to-day it is 2,414,495 acres. The old vineyards, which were destroyed by the phylloxera, have been reconstituted, as the French say, by graftings from the United States, and it is believed that they are now phylloxera proof. However, no vines will be planted in France or in any other European wine-producing country unless they are from American grafts, from vines formerly grafted here, or from original plants from the United States.

The acreage planted in vines in France has been steadily increasing during the last twenty years, but there are reasons for believing that it has come to a standstill. The organs of the wine growers advise that attention be paid now to quality and not to quantity. They advocate an improvement in color, in alcohol, and in fruitiness. The Government is disposed to augment the consumption of wine by making it cheaper. The octroi tax of 2, 3, and, in some cases, 4 cents per quart will, in all probability, be abolished within the next

six or twelve months, when wine will enter the gates of all the cities of France duty free. It is believed that the effect of this will be the drinking of more wine and less alcoholic liquor.

If the production of wine remains stationary, as is highly probable, more land will be devoted to the raising of early fruits and vegetables. The planting of mulberry trees and the raising of silkworms will receive more attention.

Wine is now produced more cheaply in California than in France. The efforts to introduce French wine into Japan have all been ineffectual on account of California competition, the Japanese declaring that they could buy wine cheaper and of as good a quality in San Francisco as in France.

The experience of the last year has given grape growers in France reason to expect an absolute immunity from losses by hail by the use of cannon. The first issue of a newspaper which is the organ of the hail destroyers has just made its appearance. It will be devoted to the publication of all experiments and investigations tending to the protection of vineyards against storms, hail, and frosts. Its first number makes the following statement of the losses resulting from hail in the Department of the Rhone alone during the years mentioned:

Year.	Number of storms.	Number of communes.	Amount of damages.	
			Francs.	
1890	17	64	3,180,519	$613,840
1891	24	75	2,455,345	473,882
1892	7	58	4,007,969	773,538
1893	11	105	9,267,912	1,788,707
1894	17	55	3,565,169	688,078
1895	16	73	5,589,771	1,078,826
1896	21	116	5,975,350	1,153,242
1897	4	111	12,853,256	2,480,678
Total			46,895,291	9,050,791

JOHN C. COVERT,

LYONS, *January 2, 1901.* *Consul.*

THE VINTAGE OF 1900 IN GERMANY.

The labors of the German wine growers have once more come to an end—that is, as far as gathering the grapes is concerned. For the wine grower, the time from early spring until the grapes are gathered in the fall is one of constant trepidation. No other crop is so uncertain or gives rise to such anxiety. A single sharp frost or a long-continued rain may suffice to ruin the vintage.

Last May, after the vines had begun to put forth their tender shoots, a severe and unexpected frost caused irreparable damage in many vineyards. After the vines had flowered the weather still remained unsettled, and the prospects were not bright. The summer and early fall months, however, were so exceptionally fine that those grapes which had escaped the frosts in May rapidly ripened to a magnificently mellow fruit.

On the whole, the grapes were quite free from disease during the period of growth. The "Sauerwurm" was their chief enemy this year, and in some districts—as, for instance, the Rheingau—did considerable damage. In the Moselle districts, the early frosts caused the chief damage and reduced the vintage to about one-fourth or one-half of a full one.

On the whole, however, the wine growers may well be satisfied with this year's vintage, both as to quantity and quality. About half of a full crop has been harvested, and the quality promises to be a good "middle wine," ranging between the vintages of 1895 and 1897.

So much for the situation in general. As regards the various wine-growing districts, the following is a synopsis of the results in each:

In Rhenish-Hesse, more than half of a full crop was harvested. The sales in small wines were very brisk; middle and better grades, however, being held for better prices. The must gauged on the average 70°, according to the Oechsle system, with an acidity of 7 per 1,000. The average price for must was 450 marks per 1,200 liters ($107.10 per 320 gallons). Higher prices, however, are by no means rare. Sales at 1,200 marks per 1,200 liters ($285.60 per 320 gallons) for the best grades give an idea how prices will run.

The Rheingau, which yields the finest Rhine wines, will only yield about one-third of a full vintage. The must gauges from 85° to 90°; that of specially selected grapes, however, far over 100°. The average price is now 1,200 marks per 1,200 liters ($285.60 per 320 gallons).

On the Middle Rhine the quantity is satisfactory, and the prices average 575 marks per 1,200 liters ($136.85 per 320 gallons).

The vintage on the Nahe River was completed by the end of October. The quantity was larger than expected. The quality varied considerably. The must gauged from 65° to 90° and even exceeded 100° in the best districts. Prices ranged from 14 to 32 marks per 40 liters ($3.33 to $7.62 per 10½ gallons), according to quality.

The vineyards of the Moselle River yielded only a scant one-fourth of a full vintage. The must gauges 80° to 95°, with an

acidity of from 8 to 9 per 1,000. The prices demanded by these wine growers are simply exorbitant—higher than they have ever been—and do not appear to be warranted, considering the quality. In the neighborhood of Trier, from 900 to 1,500 marks per 1,000 liters ($214.20 to $357 per 266⅔ gallons) is being paid. On the Upper Moselle the price is 500 marks per 1,000 liters ($119 per 266⅔ gallons), and on the Lower Moselle 750 to 1,000 marks per 960 liters ($178.50 to $238 per 256 gallons) is being paid for Riesling.

On the River Ruwer, a tributary of the Moselle, the result of the vintage is one-fourth to one-half of a full crop. The must gauges 80° to 95°. The prices for must range from 1,600 to 2,000 marks per 1,000 liters ($380.80 to $476 per 266⅔ gallons); these prices have never before been reached.

On the Saar River the conditions were similar, and prices ranged from 1,600 to 2,000 marks per 1,000 liters ($380.80 to $476 per 266⅔ gallons).

In the Haardt Hills, the gathering of the crop was completed by the middle of October. The quantity was greater than expected, and the prices, which were at first too high, have weakened, and consequently buying is brisk.

Alsace-Lorraine has had an exceedingly good vintage. However, there are still many wine growers who do not give rational treatment to their vineyards, and consequently their vintage is small and inferior.

Baden has also had a very satisfactory vintage. Both quality and quantity came up to expectations, and trading has been very brisk.

In Wurttemberg, the quantity harvested was larger than expected, because the grapes were exceedingly juicy; and as the prices offered were acceptable, trading was very brisk.

In the vineyards of Franconia that were well cultivated, the result of the vintage was satisfactory.

WALTER SCHUMANN,

MAINZ, *November 14, 1900.* *Consul.*

CULTIVATION OF HYBRID VINES IN AUSTRIA.

The Austrian Ministry of Agriculture is giving a good deal of attention to propagating hybrids of American and American-European vines. Such hybrids are not only supposed to be the most suitable stocks for lime soil in general, but are also, on account of their nearer relationship, better adapted to serve as stocks for the rather delicate scions of highly improved species than the common

nonresistant vines of American origin, which have been heretofore used for the purpose.

The ministry also imported last spring from France a quantity of newly propagated hybrids of which there had previously been but very few or no specimens at all in Austria. As the board of agriculture had recommended that every precaution be taken to prevent the introduction of the much dreaded "black rot," the vines were sent to Schärding, in Upper Austria, a district in which wine is not produced. The fact that the president of the Imperial Royal Agricultural Society of Upper Austria placed at the disposal of the Ministry of Agriculture a suitable tract of land for a quarantine nursery greatly aided the enterprise. The soil was well prepared and manured, and much care has been bestowed on the vines. The results obtained have been most satisfactory, the plants having thrived beyond expectation.

This nursery contains at present twenty thousand hardy specimens of thirteen different American and French-American varieties of hybrids. In the spring of 1901, they will be distributed for trial in the various wine-growing districts.

The confidence of the Austrian growers in these trial vines has been greatly increased by the fact that the bacteriological department of the agricultural experiment station in Vienna announces that it has made several careful examinations of the nursery in the course of the season, and has found it entirely free from black rot.

FREDK. W. HOSSFELD,

TRIESTE, *November 22, 1900.* *Consul.*

CRUDE PETROLEUM IN AUSTRIA-HUNGARY.

On the 1st of January, 1900, the import duty on crude petroleum was raised in Austria-Hungary from 2 florins to 3½ florins gold (96.5 cents to $1.69) per quintal (220.46 pounds). This step was evidently taken for a twofold purpose, viz, to suppress the importation of Russian petroleum and to increase the production of oil in the Austrian province of Galicia. These ends have already been attained.

The quantity of crude oil imported from Russia in 1899 amounted to 600,000 quintals (132,276,000 pounds). As the average export price of Russian oil was about 8 crowns ($1.62) per quintal (220.46 pounds), the total value of these imports was not far from 5,000,000 crowns ($1,015,000). The official statistics show that, while during the first seven months of last year 237,648 quintals (52,391,878 pounds) of crude petroleum were imported from Russia, the imports from that country for the corresponding period of the current year

were only 3,216 quintals (708,999 pounds), and that during the last month of this period there were no imports at all. This change has, of course, resulted to the benefit of the entire Austrian petroleum industry.

It is claimed by those who have been advocating the prohibitive measures now adopted that they were absolutely necessary to correct an abuse of long standing. The charge is made that Russian refiners have been in the habit of tainting their refined petroleum by impregnating it with certain ingredients and sending it to Austria as crude oil, always taking great care to keep its density, or specific gravity, just within the limit allowed by the Austrian customs laws for the crude article, and that the Austrian importers had only to filter, or "wash," this oil to sell it for kerosene. The fact that the commercial value of the alleged Russian crude oil is just twice that of the crude oil imported from Roumania is cited as corroborative proof of the assertion.

It is worthy of note in this connection that, while the new rate of duty applies to all importations of crude oil from Russia, Roumania is allowed to import into the Monarchy, as heretofore, a quantity not exceeding 200,000 quintals (44,092,000 pounds) per annum at the old tariff rate. The importations from the latter country amounted in 1899 in round numbers to 160,000 quintals (35,273,600 pounds), but there is every indication that during the present year they will reach the full allowance of 200,000 quintals (44,092,000 pounds). It seems, therefore, that the oil interests of Roumania will profit by the new decree, as well as those of Galicia. It is, however, the general opinion here that the Roumanian product, owing to its inferiority and the quantitive restriction placed upon its importation, will never seriously affect the Austrian market.

As the Galician producers of crude oil, by securing the exclusion of the Russian product, practically obtained a monopoly of the oil business, there was widespread apprehension that they would advance prices, and that such a step on their part would decrease the consumption of kerosene and result to the detriment of the refining interests. These fears have, however, proved unfounded; for, considering the great fluctuations which have recently taken place in the international petroleum market, prices in Austria-Hungary have remained comparatively stationary.

Moreover, the export statistics of the country show that the change in the tariff, instead of checking the refining business, has been a wonderful stimulus to it. The exportation of crude petroleum did not materially increase during the first seven months of the present year; yet that of kerosene was more than five times as large as in the corresponding period of 1899, having increased from 22,331 quintals (4,923,092 pounds) to 117,024 quintals (15,799,111

pounds). The quantity of lubricating oil exported during the same period rose from 10,387 quintals (2,289,918 pounds) in 1899 to 50,790 quintals (11,197,163 pounds) in 1900. Both kerosene and lubricating oil are exported to Germany, Italy, and Switzerland, and shipments of the latter article have also been recently made to France and Great Britain. It is a strange fact that, while the foreign sales of kerosene and lubricating oil show a marked increase, the exports of benzine during the first seven months of the year fell from 119,635 quintals (26,374,732 pounds) in 1899 to 95,799 quintals (21,119,848 pounds) in 1900. It is probable, however, that this falling off is due to increased domestic consumption.

The average export prices of the various products were as follows per quintal (220.46 pounds), gross weight:

	Crowns.
Kerosene	9.50=$1.93
Lubricating oil	13.00= 2.64
Benzine	17.60= 3.57

Upon the whole, the expectations founded on the change made in the import duty on crude petroleum have been more than realized, and the opinion prevails in oil circles that the exportations of kerosene and lubricating oil will greatly increase in the near future.

Doubts have often been expressed by experts concerning the constancy of the yield of the Galician oil wells. However, not only has there been so far no indication of a decrease in the productiveness of the old wells at Schodnika, Uryez, and Boryslav, but a number of new and very valuable oil fields have recently been discovered.

FREDK. W. HOSSFELD,

TRIESTE, *November 22, 1900.* *Consul.*

GLASS WORKS IN ROUMANIA.

I learn from reliable sources particulars regarding the production of glassware in Roumania which may interest American trade.

The four glass houses at present existing in Roumania are about able to supply all the cheap glassware needed in that country.

The works at Azuga, established in 1895, are the property of a limited company that has its seat at Bucharest. The firm employs 150 hands and produces ordinary and cut hollow glassware, and also engine-turned glass articles, the total yearly output amounting to 400,000 to 500,000 francs ($77,200 to $96,500). As regards quality and taste, especially in ordinary and medium grade goods, this factory has made remarkable progress, its output approaching foreign work in style and finish; even the colored glass shows an

improvement. The factory is worked day and night, the hands being divided into three shifts in every forty-eight hours.

The factory at Bogdanesci, situated in the district Bacau and owned by the firm Weisengrün, at Jassy, employs 80 to 100 workers and manufactures annually about 200,000 francs' ($38,600) worth of ordinary hollow glassware.

The rather primitive glass works at Storesci, in the district of Botosani, produces only hollow glassware of the common type, as cylinders for lamps, medicine and ink bottles. The annual output amounts to 100,000 or 150,000 francs ($19,300 or $28,950).

The factory at Heci-Lespezi, in the district of Suceava, has two gas ovens, Siemens system, employs 200 hands, and manufactures, besides ordinary hollow glassware, fine, cut white and colored goods, which are sold mostly in Roumania, but also in Bulgaria and Turkey.

The factory of glass plates at Ciobanesci, in the district of Bacau, which has been established since the spring of 1900 and has a capital of 400,000 francs ($77,200), may likewise be mentioned.

The wants of the country in hollow and cheap glassware are provided for by the above-mentioned factories, so that the importation of this class of goods amounts to practically nothing. For fine articles, Roumania lacks the proper materials and the trained labor.

OLIVER J. D. HUGHES,

COBURG, *December 4, 1900.* *Consul.*

INVALID INSURANCE IN GERMANY.

Ambassador White sends from Berlin, December 10, 1900, translation of a note verbale from the German Foreign Office giving the more important provisions of the law relating to invalid insurance now in force, as follows:

[Translation.]

MEMORANDUM.

(1) According to the "disability and old-age insurance law," of January 1, 1900 (Imperial Law Sheet, 1899, p. 463), the following persons are insured after the completion of their sixteenth year:

1. As heretofore, servants who are working for wages;
2. Deviating from the law heretofore in force:
   (*a*) Private teachers and tutors—for instance, male and female private teachers and male and female private tutors (public teachers do not pay any insurance for giving additional private lessons);
   (*b*) Other employees, whose main occupation is that of a servant,

to *a* and *b*, whenever wages are paid, and the annual income does not exceed 2,000 marks.

Under the group "other employees," those are mainly to be figured who are employed in public or private institutions or business establishments of every description, as well as officials of the medium class; in the first case, therefore, the actual office personnel (clerks, registrars, calculators); in the latter, private secretaries, companions, ladies in waiting, etc.

The following are also to be regarded as "wages:" Dwelling, clothing, board, fuel, etc. An occupation in return for which "board and lodging" is only granted to such an extent as would suffice to cover the necessary demands of living to the employed does not necessitate insurance.

Stress is laid on the fact that every temporary employment makes the insurance compulsory, in so far as the Bundesrath does not make an exception to this, according to the regulation of December 27, 1899. According to this regulation, compulsory insurance for temporary employment does not, as a rule, exist when performed by persons who do not follow the occupation of laborers and receive wages therefor, and who only do this occasionally, when additional help is required, or who perform the work at regular intervals, but only in addition to their other work and against small pay, which for the time of employment would not suffice to pay for their support, and which would not be in comparison with the amount of insurance which would have to be paid for the time.

(2) The insurance of all insured persons in Berlin is effected at the "Landes-Versicherungsanstalt," Berlin C, which has its offices at Kloster Strasse, 41, while in the suburbs of Berlin it is effected at the "Landes-Versicherungsanstalt Brandenburg," Mathäikirch Strasse, 19. A special announcement of arrival and departure with the insurance institution need not be made. The said persons are insured in accordance with the law for "disability and old age" from January 1, 1891, and those who are now brought under the insurance law are to be insured from January 1, 1900.

(3) The paying of the insurance contributions is effected by pasting stamps on a receipt card of the insured. The contributions are to be paid for every week in which the person has been employed under the conditions necessitating insurance for workingmen or servants. The week for contributions begins on Monday of each calendar week. The contributions or stamps are to be paid by the employers; they are, however, entitled to deduct one-half of the same from the servants' wages on their payment. The stamps are to be pasted on the receipt card by the employer.

The stamps can be bought at all post-offices, and also at those shops where the sale of stamps is indicated by signs.

While stamps were formerly sold covering the period for one week only, they may now be purchased for a period of two and of thirteen weeks (the latter to cover a period of three months).

(4) Contributions are made each pay day (monthly, quarterly, etc.), according to the date when the wages are paid to the servants—monthly, quarterly, etc.—and in the following manner: The employer pastes stamps in continuous succession on the receipt card of the employed for the amount of the contribution, which is to be paid for for the period of the employment—that is to say, for the number of weeks for which wages are to be paid to the employee, and also with reference to the wage class. Stamps covering a period of more than one week must be canceled by the employer; stamps for one week may be canceled. The cancellation can only be effected by writing plainly on each stamp or stamping in figures the date when the cancellation took place—for instance, for December 15, 1900, "15, 12, 00." Ink or similar material is to be used for the cancellation. Other marks for canceling are not permitted.

The ultimate payment of the contribution, after it has become due, is not permissible after two years, and, if the amount to be paid has been fixed too late on account of a dispute regarding the amount to be paid or for other reasons not caused by the participants, not after four years.

(5) The number of the wage class is decided by the amount of the annual earnings of the insured, whether payment in cash or payment in kind. The law has fixed five wage classes, as follows:

To class 1 belong all persons under obligation to be insured, earning annually not more than 350 marks ($83.30).

Class 2, those earning annually from 350 to 550 marks ($83.30 to $130.90).

Class 3, those earning annually from 550 to 850 marks ($130.90 to $202.30).

Class 4, those earning annually from 850 to 1,150 marks ($202.30 to $273.70).

Class 5, those earning annually more than 1,150 marks ($273.70).

For deciding the question to which wage class the insured belongs—aside from the exceptions herein specified—the actual amount earned is not final. Rather, as the basis of computation, in the case of insured not belonging, as will generally be the case, to the "sickness fund," the annual wages, pursuant to the legal provisions of the "sickness" insurance law of April 10, 1892 (Imperial Law Sheet, p. 417), is assumed to be three hundred times the amount fixed by the superior administrative authority of the place of employment, as the customary pay in that locality, of the ordinary laboring man or working woman by the day.

According to this, the annual wage is fixed at 300×2.70=810 marks ($192.78) for males for Berlin; these persons, therefore, belong to the third wage class. The annual wages of females to 300×1.50=450 marks ($107.10); they, therefore, belong to the second wage class.

Teachers and tutors (female teachers and tutors) belong to the fourth wage class at least, but, whenever it is shown that they have an annual income of more than 1,150 marks ($273.70), to the fifth wage class.

In case a fixed amount in cash payment is agreed upon for weeks, months, or years, and if the amount is higher than that given above as the average payment, this payment is to be taken as a basis.

Employers and servants can, however, agree that the insurance shall be made in a higher wage class than that which would necessarily follow from the amount of the annual wages—so that female servants can be insured in the third, fourth, or fifth and male servants in the fourth or fifth wage class. In case such an agreement is arrived at, the employer must pay one-half of the entire amount. The insured may for himself claim the insurance of the higher wage class. If this is the case, however, the amount to be paid by the employer is not to be calculated according to the higher wage class, but according to the wage class fixed by law; the remaining amount is to be paid by the insured.

(6) For each wage class different stamps will be provided, and, as already stated, for one, two, or thirteen weeks. Their price will be:

Wage class.	One week.		Two weeks.		Thirteen weeks.	
	Pfennigs.		*Pfennigs.*		*Pfennigs.*	
1	14	$0.03	28	$0.06	182	$0.43
2	20	.047	40	.094	260	.618
3	24	.057	48	.114	312	.74
4	30	.071	60	.142	390	.928
5	36	.085	72	.171	468	1.113

(7) The insured has to provide himself with the receipt card for pasting on the stamps. He may be held to do this by the police. These will be furnished without fees or other cost by the chief of that police circuit in which the employer resides.

In case the servant should fail to procure the receipt card, the employer himself may request its issue for the servant, and this course is recommended in order to avoid the consequences of not being in possession of the same. To procure the issue of the first receipt card for a servant, the production of a servant book (Dienst-buch) before the proper authorities will suffice. Other proof will be sufficient for proving the identity of persons requesting the issue of a receipt card—for instance, birth and baptismal certificates.

The receipt card must, in order to remain valid, be presented at the office given above in order to have it exchanged for another within two years from the date of issue. This exchange must also be effected by the insured.

AMERICAN FURNITURE IN GERMANY.

This consular district offers, in my judgment, a desirable market for American household and kitchen furniture, especially for medium-grade oak chairs—with and without rockers—tables, and possibly bookcases. Rocking-chairs, almost unknown in many parts of Germany, are gradually growing in favor in this locality. A dealer here recently laid in a small and fairly select stock of oak rockers, dining-room chairs, and ordinary office chairs, all of American make. He assures me he is having a fair trade at good prices. As is well known, American desks and other office furniture find an excellent and constantly growing market in Germany. Well-directed efforts would secure even better result in other lines of American furniture.

German furniture is, as a rule, fairly handsome in appearance, but exceedingly expensive. Many of the processes of carving and otherwise decorating sideboards, mantels, chairs, etc., effected in the United States by machinery, are here worked out by hand at greatly increased cost. Much furniture is made under special order. Our manufacturers should, first of all, if they seek to enter and to hold this market, send nothing but well-made, substantial furniture. The German market is no place to sell "shoddy" goods, and certainly not shoddy furniture. The furniture sent "knocked down" should be carefully put together by competent persons. It should be revarnished and put in first-class shape before being placed on the market. The manufacturer should himself insist upon this, or, better still, arrange to have it done by his own employees.

Mannheim being practically at the head of Rhine navigation and, with its immediate suburbs, having a population of about 210,000, offers excellent facilities as a center of distribution for

American wares to south and west German points. Ocean barges, loaded directly from steamers at Rotterdam, Amsterdam, and other ports, come to Mannheim with vast cargoes of lumber, petroleum, copper, cotton, and other merchandise. Wiesbaden, Baden Baden, Karlsruhe, Heidelberg, Strassburg, and other near-by points much frequented by Americans should insure a special demand for our furniture.

In this connection may be mentioned barber chairs. The native barber chair is cheap and uncomfortable. The head rest is generally wood, without a cushion of any kind. The German barber shaves his customer rapidly, consuming but a few minutes in the entire process. The elaborate American chair, in which the customer is in an almost horizontal position, would not meet with favor here. A neat, comfortable chair, with a plain foot rest and a head rest easily adjusted and comfortable, would, in my judgment, find a ready sale in this part of Germany if properly introduced. They should be handled by a local dealer or agency, well located and thoroughly competent.

H. W. HARRIS,
Consul.

MANNHEIM, *December 15, 1900.*

OFFICE FURNITURE IN GERMANY.

I am advised that in Heidelberg University, near this city, where about fifteen hundred students are in attendance, only a small number of fountain pens are in use, and few, if any, are offered for sale. The students carry ink in bottles to and from classes. It would appear that our lower priced pens should find a market there and in other parts of the district, including Mannheim, where fountain pens are rarely seen.

The attention of American manufacturers has been called to this field as a possible market for safes. I note that a comparatively small number of safes are in use in this city. The few employed are, for the most part, crude-looking affairs, with old-style locks. Judicious efforts on the part of our manufacturers should result in large sales of our medium-sized store and office safes. German offices and stores are rapidly adopting modern furniture, including desks, typewriters, file cases, cash registers, etc., and safes should prove equally as popular.

Improved devices for registering the attendance of employees at factories are being introduced to some extent, though as yet many

factories do not employ them. So far as I can learn, the various devices in use in the United States for registering the whereabouts of watchmen employed in factories at night are not used here. As the city of Mannheim and its suburbs are largely devoted to manufacturing and new plants are being constantly added, it would seem that a market in this line might be secured.

H. W. HARRIS,
Consul.

MANNHEIM, *December 6, 1900.*

THE WORLD'S GRAIN PRODUCTION.

According to the various authorities, the crop of wheat for the year 1900, when compared with that of 1899, shows a decrease ranging between 1,300,000 and 1,900,000 bushels. As to the different countries, the estimates for the year's crops are reported as follows:

Exporting country.	1899.	1900.
	Bushels.	*Bushels.*
Russia	454,108,400	415,288,000
United States	552,995,093	497,123,811
Hungary	139,633,067	134,818,133
Roumania	26,301,573	64,520,107
Bulgaria	24,014,480	31,718,373
Servia	9,990,987	11,977,147
Turkey in Europe	23,954,293	31,959,120
Turkey in Asia	39,963,947	39,963,947
Persia	20,062,253	22,365,365
British India	232,934,437	179,693,312
Canada	60,626,029	45,471,027
Mexico	12,518,827	12,458,640
Chile	12,518,827	12,518,827
Argentine Republic	95,877,393	95,877,393
Uruguay	12,440,584	16,627,725
Algiers	12,037,333	16,250,400
Tunis	5,597,393	7,824,267
Egypt	11,471,578	12,904,021
Cape Colony	4,303,347	4,014,451
Australia	58,778,299	55,624,517
England	66,237,261	51,611,496
Norway	312,980	312,980
Sweden	4,453,937	4,583,018
Denmark	4,213,183	4,213,183
Holland	5,019,707	4,323,466
Belgium	15,973,430	17,635,182
France	364,882,223	308,242,511
Spain	100,333,952	108,958,940
Portugal	4,586,224	5,164,016
Italy	139,350,190	114,358,380
Switzerland	3,912,133	4,514,000
Germany	141,368,480	115,877,390
Austria	50,316,053	42,251,040
Greece	4,778,821	5,145,960

Nor did the year's crops of rye all the world over equal those of last year, as the following table will show:

Country.	1899.	1900.
	Bushels.	*Bushels.*
France	67,194,114	63,969,828
Austria	85,443,571	66,936,171
Italy	5,997,171	2,579,428
Germany	341,516,343	305,081,914
Spain	21,409,257	19,087,771
Belgium	17,153,200	16,766,285
Holland	10,317,714	10,317,714
Sweden and Norway	22,247,571	24,762,514
Denmark	17,153,200	17,540,114
Russia	911,634,543	886,678,571
Hungary	47,428,743	37,401,714
Roumania	1,870,085	4,127,085
Bulgaria	12,897,143	6,771,000
United States	23,343,828	23,859,714
Servia	1,805,600	1,612,143
Turkey	15,152,357	6,706,514

The entire trade of Germany during the past five years, excluding gold and silver, amounted to—

Year.	Imports.	Exports.
	Metric tons.	*Metric tons.*
1899	44,700,000	30,400,000
1898	42,700,000	30,100,000
1897	40,200,000	28,000,000
1896	36,400,000	25,700,000
1895	32,500,000	23,800,000

The importation of the five leading grains into Germany in 1899 amounted to—

Whence imported.	Wheat.	Rye.	Barley.	Oats.	Corn.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*
Russia	12,209,810	18,123,175	26,468,978	9,025,081	4,972,160
United States	26,098,790	2,771,497	2,521,511	6,510,459	49,091,718
Argentine Republic	9,266,669	.....	.....	.....	4,987,401
Roumania	1,491,779	598,391	1,763,680	1,047,185	3,700,578
Australia	514,407	.....	.....	.....	.....
Austria-Hungary	.....	.....	17,260,185	.....	.....
Denmark	.....	.....	1,685,600	.....	.....

From the foregoing, it will be seen that Russia and the United States are the two countries from which Germany draws her main supplies of breadstuffs. It is also interesting to note that, while Russia took the lead in 1898 in selling grain to Germany, the importations from the United States during the year 1899 exceeded those of Russia by about 19,861,600 bushels.

HENRY W. DIEDERICH,

BREMEN, *December 14, 1900.* *Consul.*

APPLES IN ENGLAND.

Americans, as a rule, find it difficult to understand why such common fruit as apples, for instance, should be so dear in England. Only a very few of the hardier specimens ripen in this climate. Having, however, the best gardeners in the world, the most has been made of circumstances, and by careful cultivation a few dessert fruits of fine flavor but of small and poor appearance have been produced; also a few cooking apples of questionable quality. Within recent years, the importation of American, Canadian, and colonial apples has assumed considerable proportions, and the following article from the London Mail of December 4 will illustrate general conditions, while it gives deserved credit to Canadian enterprise:

The *Evangeline*, the new fruit boat belonging to the Furness Line, was inspected yesterday at the Victoria Docks by various representatives of the fruit trade. This fine boat has just brought thousands of barrels of Canadian apples to London, and they are all in splendid condition. The striped Gravensteins and the crimson-cheeked Baldwins looked as fresh as when they were pulled from the trees in the Annapolis Valley. Throughout the year the *Evangeline* will bring big supplies of Canadian fruit to the London market, and it will all be perfectly fresh and sound.

The successful importation of fruit from Canada is due, the manager explained to a Daily Mail representative, to rapid transit and to storage between decks ventilated by natural means, not by electric fans. With a carrying capacity of over 30,000 barrels, or 90,000 bushels, of apples alone, the *Evangeline* will largely increase the apple supplies of the United Kingdom. The fruit she brought made the highest prices that have been reached this season, and therefore fruit shippers on the other side will be encouraged to export as much good fruit as they possibly can. Her next consignment will be for the Christmas market.

Fruit from the vast orchards of Oregon and California has also flooded London and the large provincial towns. The imports of this season have so far been phenomenal both in quality and quantity. Mr. Garcia, of the firm of Garcia, Jacobs & Co., apple merchants, informed a Daily Mail representative yesterday that the immense crop of California and Oregon apples will be of great advantage to consumers, who will be able to purchase fine fruit at moderate prices. California Newtown Pippins, he said, are coming in extraordinary abundance, and the public will be able to buy them at 3d. or 4d. (6 or 8 cents) per pound. In other kinds of fruit, such as plums and oranges, the California trade is growing with great rapidity. The Cape, too, thanks to Messrs. Rhodes and Rudd, is increasing its fruit trade. On one of his farms, Mr. Cecil Rhodes has installed a California expert, who has imported and planted every kind of fruit. In the new century England will be colonially supplied with all kinds of fruit.

Nottingham is in almost the exact center of England, without port facilities, and must therefore pay interior freightage upon importations. This amounts, from either London or Liverpool, to about 1s. (24.3 cents) upon either a barrel or case of apples.

Liverpool quotations to a leading firm here to-day are as follows (wholesale):

Description.	Quotations.		
	s. d.	s. d.	
Canadian Russets.....per barrel...		16 0	$3.89
Maine Baldwins:			
Finest.....do.....	16 6	to 17 0	$4.01 to 4.14
Fine.....do.....	15 6	to 16 0	3.77 to 3.89
Nova Scotian Ribstons.....do.....		15 6	3.77
American Newtowns:			
Finest.....do.....	25 0	to 26 0	5.08 to 5.33
Fine.....do.....	22 0	to 23 0	5.35 to 5.60
Medium.....do.....	18 0	to 19 0	4.38 to 4.62
California Newtowns:			
Finest.....per box...		9 0	2.19
Fine.....do.....		8 6	2.00
Oregon Newtowns, finest.....do.....	9 0	to 9 3	2.19 to 2.25

London quotes as follows:

Description.	Quotations.		
English apples:			
Cooking—	s. d.	s. d.	
Finest.....per bushel...	6 0	to 7 0	$1.46 to $1.70
Fine.....do.....		5 0	1.22
Blenheims.....per half bushel...		4 6	1.09
Ribstons.....do.....		5 0	1.22
Cox's Orange.....do.....		6 0	1.46
Nova Scotian:			
Ribstons.....per barrel...		15 6	3.77
Kings.....do.....	16 6	to 17 6	4.01 to 4.25
Baldwins.....do.....		15 6	3.77
Greenings.....do.....		15 6	3.77
Canadians:			
Baldwins, finest.....do.....		16 6	4.01
Spies, finest.....do.....		16 0	3.89
Greenings, finest.....do.....		16 6	4.01
California Newtowns, finest.....per case...		10 0	2.43

Add the shilling (24.3 cents) per package in either case, and you arrive, not at the retail, but at the wholesale price of apples in Nottingham to-day. At retail one must pay for Canadian Russets, Spies, Baldwins, or Greenings 3d. (6 cents) per pound; for Oregon or California Newtowns, 5d. (10 cents) per pound.

Is it not worth while for American fruit growers to consider the advantages reaped by Canadians through the institution of this new line of ocean fruit vessels, to consolidate their interests, and to meet the eminently practical features of this new competition?

S. C. McFARLAND,

NOTTINGHAM, *December 5, 1900.* *Consul.*

FREIGHT REBATES IN ENGLAND.

It is popularly supposed that no such thing as a rebate on freight of any quantity can be given by an English railroad. An example showing an exception has just come to light, and its history will prove interesting to both railroad authorities and shippers in the United States. To avoid any question of prejudice, the following is extracted from a London paper—the Mail:

The coal factors and merchants are up in arms against the Midland Railway Company, and the other railways are on the side of the factors and merchants. The matter in dispute is a secret rebate agreement between the Midland Railway Company and Messrs. Rickett, Smith & Co., and the stake involved is £500,000 ($2,433,250). Under this agreement, the railway company allows Messrs. Rickett 1¼ per cent on all sums paid by them to the company for the carriage of coal. The other factors and merchants declare that both they and the other railway companies have long suspected the existence of such an agreement and have taxed the Midland Company therewith, but have always been met with a denial. Now, at last, somebody in the secret has given the game away, and the company has been unable to deny it.

The coal men other than Messrs. Rickett now demand retrospective compensation to the tune of something like half a million sterling for the preference which has not been accorded them. And the Society of Coal Merchants has resolved to take legal action against the company. Such action the Midland will welcome. In one shape or another, this preferential agreement has existed since 1862. The current agreement is dated 1889, and the rate of rebate was revised in 1892. Therefore, it harks back to a time when the affairs both of the railway company and of Messrs. Rickett were in somewhat other hands than now. The factors claim that the position of the Midland has been untenable ever since the passing of the railway act of 1888. They claim that, although the traffic brought to the railway by Messrs. Rickett is very large—the agreement stipulates for a minimum annual payment of £140, 000 ($681,310)—no special circumstances exist sufficient to warrant such a preference.

Whatever the rights or wrongs of the dispute may be, the position in which the Midland Company now finds itself is hardly enviable. A great deal of the important mineral traffic upon which the company largely relies for dividend comes from districts where five companies are in competition. These are the Midland, Northwestern, Great Northern, Great Central, and Great Eastern. Hitherto, all five companies have worked in some sort of agreement; now the hand of all the rest is likely to be against the Midland. So is the hand of the other nine hundred and ninety-nine of the Midland's mineral customers, whose bitterness arises not only from the loss of the rebate, but also from the loss of the contracts which they allege that rebate has enabled Messrs. Rickett to secure.

The company, on the other hand, maintains the fullest justification of the rebate is to be found in the enormous through traffic furnished by Messrs. Rickett, which it would be unfair to treat on the same footing as traffic which has to be distributed truck by truck all along the line. They proclaim themselves willing to extend similar terms to any firm providing traffic of a similar character.

In this connection, the coal owners of South Yorkshire and other districts are considering the question of next year's supplies of coal for railway companies. A meeting has already been held in Shef-

field, and, although the colliery proprietors are not of one mind in the matter, the preponderance of feeling is in the favor of a reduction. Last year, the railway companies were required to pay an advance of 5s. ($1.22) per ton. In most instances it was paid. The Midland Company, however, stood out and took the risk of purchasing in the open market outside the South Yorkshire coal field. The colliery managers say that they had ultimately to pay more money than if they had contracted at the price fixed. It was not unnatural that the Midland Company should hesitate to pay 16s. ($3.89) per ton, seeing that the difference in price represented to them a twelve months' coal bill increased by £337,500 ($1,642,444). Other companies had to suffer in proportion. The Great Western in its locomotive department alone had to pay £250,000 ($1,216,625) more; the Northwestern, £182,500 ($888,126) extra; the additional charge to the Great Central was £162,500 ($790,806); to the Great Northern, about the same; to the Southwestern and Chatham and Dover, about £85,000 ($413,653); and to others in proportion. The coal owners are now proposing to provide supplies for next year at 15s. ($3.65) per ton, being a reduction of 1s. (24.3 cents) per ton.

As the Midland Company consumes 1,350,000 tons per annum, a reduction of 1s. (24.3 cents) per ton would mean a saving of £67,500 ($328,489). The London and Northwestern would save a good deal more, as this company is the largest consumer of locomotive fuel in the Kingdom. Probably, the smaller companies would feel the benefit more than the larger. Although this reduction is considerable, the railway managers are not disposed to regard it as adequate; but the coal owners do not appear disposed to make any greater concession.

Owing to the severe depression in the coal trade of Dean Forest, the house-coal owners have resolved to reduce the quotation 2s. (49 cents) per ton from December 1. Workmen's wages are reduced 10 per cent. Steam coals are also reduced, the quotation being about 4s. (97 cents) per ton less than a few weeks ago.

S. C. McFARLAND,

NOTTINGHAM, *December 6, 1900.* *Consul.*

AMERICAN UNDERWEAR IN ENGLAND.

English discussion of the American commercial invasion continues to grow more pointed and frank. Hardly an issue of the leading English papers appears without reference to American competition in some line. Within the past two years, the tone of such articles has become serious, and economic writers are kept busy attempting to find acceptable explanations for American success.

Leicester, in this consular district, is the seat of two great industries—the manufacture of boots and shoes and of hosiery (including underwear). A few years ago, large quantities of boots and shoes were exported to the United States. Now, not only are there no exports, but enterprising American firms have actually opened retail stores there, while much of the machinery used is of American make.

Hosiery exports a few years ago were very large. They are now comparatively small, and, as shown in previous reports, are constantly declining in volume; and, to cap the climax, American goods are actually selling at retail in this market. As this is the very home of the British industry, it is not astonishing that such a fact should come as a shock to natural British pride, and that its importance, as disclosing the general trend of trade, should be minimized and, as a rule, made light of. The leading trade organ—the Hosiery Trade Journal, of Leicester—attempts in the following suggestive article, in its current number, to bring the more serious phases of the matter to the attention of its readers:

The report from the British consul at Philadelphia strengthens the fact that America is making fast strides in the manufacture of hosiery of all kinds, and that in the near future American goods will be met in many markets where same have been up to the present unknown. As such advancement takes place, so will decrease the importation by that country of hosiery goods, and those countries which have in the past supplied America with hosiery will have to find other markets. This is no surmise, for at the present time the exports of hosiery from both Germany and England are nothing like what they were in years past, and, as stated, have the tendency to still further decrease.

We have previously commented on the importation of cut underwear from the United States into England, and there are those who are inclined to treat this question as a mere "bogie;" but when such goods can be seen exhibited in the windows of such hosiery towns as Nottingham and Leicester, then the "bogie" has assuredly taken some form of reality. Critics say the goods are not so well knitted as English fabrics, but certainly in fleeced goods the fleecing has had the special study of the United States manufacturer.

S. C. MCFARLAND,

NOTTINGHAM, *December 17, 1900.* *Consul.*

IRISH DEMAND FOR SULPHATE OF COPPER.

Owing to an increasing trade in sulphate of copper in this country, I have been appealed to by Messrs. John Lytle & Sons, of this city, to place them in communication with firms in the United States desirous of exporting this commodity. The firm of Messrs. Lytle & Sons is perhaps the largest of its kind in Ireland, manufacturing artificial manure and dealing in grass and clover seeds to a very

wide extent. They wish to import the sulphate of copper for selling in its raw state—also for the making of spraying preparations—and desire it 99 per cent purity. In this connection, I might mention, for the benefit of intending exporters from the United States, that there are two lines of freight steamers making fortnightly sailings between Belfast and American ports, viz, the Lora Line, running to Baltimore and Newport News, and the Head Line, running to New Orleans.

MALCOLM T. BRICE,
Vice-Consul.

BELFAST, *December 13, 1900.*

AMERICAN ZINC ORE IN THE NETHERLANDS.

Consul Listoe sends the following from Rotterdam, December 13, 1900:

A large dealer in coal and iron ore in this vicinity, writing to the consulate about other matters, closes with the following remarks, which may be of interest to American owners of zinc mines:

It seems to me that there is now a good field open in Europe for American zinc ore.

It is certain that the zinc mines in Europe are well-nigh exhausted, and I am given to understand that the United States is able to furnish us with any quantity desired.

The fact that zinc ore is more valuable than iron ore, and consequently could better support the freight, ought also to be a point in favor of the United States.

Any information you can give me on the subject of zinc ore or as to mine owners with whom I could open correspondence will be thankfully received.

Any mine owner or dealer in zinc ore who desires to extend his business to Europe can obtain the address of the inquirer through this consulate.

CITY OWNERSHIP OF STREET CARS IN LIEGE.

The question of municipal control and ownership of street-car lines, gas and electric lighting, and waterworks plants has been seriously occupying the attention of the officials of this province for the past few years, with the result that the city of Liege has taken charge of three of the street-car lines and has in contemplation the purchase of the above-mentioned plants on the expiration of their franchises if the present undertaking meets with the expected success.

The franchises (for twenty-eight years and eleven months) of the three lines owned and operated by the Société Anonyme Tramways Liègeois, in the city of Liege (in all 11.9 kilometers, or about 7.4

miles), expired December 1, 1900, and the city purchased them, together with the rolling stock and equipments, for a sum of 1,200,000 francs ($231,600), and has leased them for ten years and one month to De Melotte & Co., under very rigid regulations. This company is composed of the employees of the old company, with a capital of 170,000 francs ($38,810), divided into one thousand seven hundred shares of 100 francs ($19.30) each.

This company is to pay a rental of not less than 300,000 francs ($57,900) per year on a gross earning of 800,000 francs ($154,400) or less, and an increase of 1 per cent additional on the gross receipts every time these increase 50,000 francs ($9,650); thus, should the gross receipts reach 900,000 francs ($173,700), the amount to be received by the city would be the 300,000 francs plus 2 per cent of the 900,000 francs, or 18,000 francs—a total of 318,000 francs ($61,372)—and so on.

The city is to provide all new equipment, side tracks, extensions, etc., and is to be the sole judge of what is needed. It is to have a general supervision of the running of the line. The books of the company are to be open at any time to a properly authorized representative of the city.

The lessees are to make all repairs of the line and rolling stock, and to keep the roadway between the tracks and for 19 inches on either side in good repair, and to pay all damages resulting from accidents.

There are at present employed on these lines thirty motor cars and thirteen trailers, and, owing to the great reduction in fares, this equipment will doubtless be insufficient. The cars run every six minutes between the hours of 8.30 a. m. and 8.30 p. m., and at least every fifteen minutes the balance of the time from 7 a. m. to 10 p. m. in winter and from 6.30 a. m. to 11 p. m. in the summer. The usual speed is 10 kilometers (6.2 miles) per hour, with a maximum speed of 12 kilometers (7.4 miles) per hour.

The fare charged by the old company was, for first class, 10 centimes (2 cents) for the first kilometer (1,093.6 yards) and 5 centimes (1 cent) for each additional kilometer, with maximum charge for single trip of 20 centimes (4 cents); while for second class the charges were 8, 4, and 16 centimes, respectively. The new fare to be charged is 10 centimes (2 cents) for any single trip, with double fare after 11 o'clock p. m. There will be no second class.

There were employed by the old company 205 persons, who were paid from 3 francs (57.9 cents) to 5.50 francs ($1.06). Under the new management, there will be at least as many persons employed, and the city has made it obligatory upon the company to pay its motormen and conductors not less than 45 centimes (8.7 cents) per

hour for a day of nine hours and 55 centimes (11 cents) for all overtime. The conductors and motormen must be given one holiday every two weeks at full pay.

The new company also pays 20,000 francs ($3,860) per year for the advertising privileges in the cars and about the stations of the lines.

ALFRED A. WINSLOW,
Consul.

LIEGE, *December 5, 1900.*

PREVENTION OF HAILSTORMS BY CANNON.*

The French delegates to the congress held in the latter part of November in Padua, Italy, to consider the question of firing cannon at clouds to prevent hail have returned to this city and will make their report to the French Society of Viticulture this week. Their secretary, Mr. Jean Raulin, has placed the advance sheets in my hands.

The reports presented to the congress by wine growers were all in favor of the efficacy of the use of cannon. Insurance men whose business is to insure crops against damages from hail attended the congress with the intention of proving that cannon firing was useless. Their propositions were overwhelmingly voted down. By an almost unanimous vote, it was resolved that the firing of cannon stopped the movement of the hurricane; that the lightning and thunder ceased; that rain or melted snow immediately began to fall; and that the clouds soon passed away.

Mr. Durand, the director of the large agricultural college near Lyons, told me that the experience in the use of cannon in Italy left no possible doubt of their absolute efficacy. He says the vineyards on the line of the hail covered by the cannon were protected; those outside the spaces covered by cannon but very near them were destroyed by the hail.

A number of cannon were presented to the congress for examination. The report says: "The most remarkable one, and which seems likely to revolutionize agricultural artillery, is the powderless cannon of Maggiora & Blanchi."

I translate from the Italian a part of the prospectus of Messrs. Maggiora & Blanchi:

> In our opinion, this problem encountered almost insurmountable obstacles in the use of powder cannon. It was necessary to find an explosive not only absolutely free from danger and easily handled, but which would also produce the same effect as powder.

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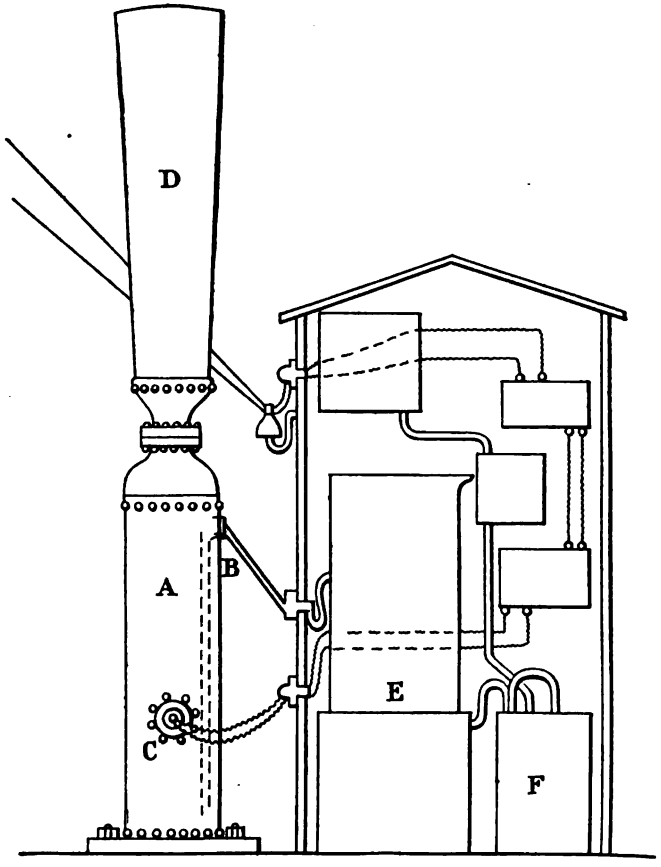
* See ADVANCE SHEETS No. 807 (August 14, 1900) and No. 916 (December 21, 1900).

Acetylene gas mixed with air has, in our opinion, more than solved this difficult problem.

The cannon (a drawing of which is here given) which permits the use of this



explosive consists of a cylindrical chamber of homogeneous iron (A) provided with a special tube (B), through which passes the mixture and an electric lighter (C). This is the chamber where the explosion occurs.

This cylinder is surmounted by a dome (D), formed by a hollow hyperboloide, placed in such a way as to direct the lines of force straight toward the clouds, but without permitting them to cross each other; on the contrary, slightly enlarging them.

The tube (B) for the introduction of the mixture is directly attached to an acetylene gasometer (E), which is fed, as needed, by an acetylene generator (F) and furnishes the mixture to the cannon.

A rochet, for lighting, and an electric escape valve complete the apparatus.

As will be seen from its simplicity, the apparatus may be placed anywhere and left for years without fear of accident either from the cannon or the explosive material, which is in the generator in the condition of a mineral absolutely inert and consequently harmless.

Suppose we had fifty cannon stationed upon a given space and connected by an electric wire so as to form one or a number of batteries terminating at one station.

By simultaneously closing the circuit between a little battery of piles and the electric escape pipe or safety valve of each cannon, through the action of a single operator, every cannon is charged automatically in a few seconds. By breaking the circuit of the escape valve and closing the rochet circuit, all the cannons or a battery of cannons, accordingly as they are stationed, are discharged at once.

This done—and it only requires about ten seconds—the circuit between the pile and the escape pipe is reclosed and the firing goes on again.

The generator, which we have made expressly for this work, permits the cannon to fire over 1,000 times consecutively without being touched, so that each cannon may be considered in a state of readiness for six months' use or longer.

When the charges are used, a supply of carbure of calcium necessary for six months (about 65 pounds) is placed in the generator, and the cannon recommences its work against the hail.

The inventors of this gun refuse to sell it, but next year they will undertake to insure grape growers against all damages from hail for a comparatively small sum.

JOHN C. COVERT,
Consul.

LYONS, *December 7, 1900.*

PANIC IN GERMAN PAPER TRADE.

The existing panic in the German paper trade and present high prices of paper, especially printing paper, which have received much attention from the German press, principally affects the newspaper publishers, who can not transfer, at a moment's notice, the rise in prices (from 40 to 50 per cent) to the shoulders of the general public. That there was no real ground for the enormous rise is proved by the fact that paper manufactories have declared most satisfactory dividends during the last few years.

Statistics show that the German paper industry is not in bad condition. Taking only the three chief kinds into consideration, we find that the imports of paper into Germany during the first three quarters of 1900 amounted to 1,201 tons, valued at 1,032,000 marks ($247,116), against 1,096 tons, valued at 954,000 marks ($227,052), during the same period of 1899—an increase of 9.5 per cent in quantity and 8.1 per cent in value. Of the total import, 487 tons (40.6 per cent) came from France, 217 tons (17.2 per cent) from England, and 195 tons (16.3 per cent) from Austria-Hungary.

The exports of German writing, drawing, and printing paper amounted, during the first three quarters of 1900, to 28,925 tons, valued at 8,601,000 marks ($2,047,038), against 24,004 tons, valued at 7,219,000 marks ($1,717,122), during the same period of 1899; showing an increase of 40.5 per cent in quantity and 19.2 per cent in value. The difference between these two percentages may find

its explanation in the fact that the most essential kinds of paper have shown a greater increase in export, and that perhaps the present higher prices were not taken into account by the appraising officers.

The largest buyer of German paper is England, which bought 10,272 tons (35.5 per cent) of the total export during the first three quarters of 1900. Further may be mentioned Holland, with 3,225 tons (11.1 per cent); Brazil, 2,727 tons (9.4 per cent); Argentine Republic, 2,587 tons (8.9 per cent); Japan, 1,663 tons (5.7 per cent); United States, 613 tons (2.2 per cent); and Chile, 610 tons (2.1 per cent); after which follow with smaller quantities Australia, Uruguay, Denmark, Sweden, and Switzerland.

The surplus of exports over imports during the first three quarters of 1900 was 27,723 tons, valued at 7,569,000 marks ($1,801,422). In view of the high price of printing paper, there seems to be a tendency to make a corresponding increase in the subscription prices of newspapers.

The present duty on paper imported into Germany is 100 marks ($23.80) per ton. The manufacturers are said to wish this duty increased; their opponents, however, declare that the duty should be entirely abolished. Should the latter prevail, a splendid field would be opened up for United States paper manufacturers.

THOS. EWING MOORE,

WEIMAR, *December 20, 1900.* *Consul.*

CALCIUM CARBIDE IN GERMANY.

On November 30 last, the convention of Swiss, Austrian, Swedish, Norwegian, and German manufacturers of calcium carbide, which was in session at Frankfort, combined in establishing price schedules and a mode of controlling the sale of their products. The Deutsche Gold und Silber Scheide-Anstalt, of Frankfort (which has branches in the United States and other countries), was appointed the sole agent for the sale of the syndicate's products. It is expected that by this combination the acetylene industry will be considerably strengthened. The members have adopted measures to avoid the fluctuating and ruinously low rates which, owing to heretofore existing sharp competition, have made the manufacture of their products unprofitable.

The German acetylene industry is very important, there being at present in the Empire over 200,000 plants producing this gas. New patents for improved methods of production are constantly being issued. Thirty-two of the smaller towns in Germany are lighted by

acetylene gas, and a number of other plants are in course of erection. The gas is also used by the railroads for lighting passenger cars.

This year's production of calcium carbide in Germany is estimated at 20,000 metric tons, equivalent to 360,000 hectoliters (9,500,000 gallons) of petroleum.

SIMON W. HANAUER,
Deputy Consul-General.

FRANKFORT, *December 7, 1900.*

THE GROWTH OF GERMAN CITIES.

Under the system which prevails in Germany, a census of the population is taken on the 1st of December every five years, namely, each decennial year and the intermediate fifth year. The census which was taken on the 1st of the present month shows the following changes since December 1, 1895, in the population of the thirty-two principal cities, which have each more than 100,000 inhabitants:

City.	1900.	Increase since 1895.	
		Inhabitants.	Per cent.
Berlin	1,884,345	207,041	12.3
Hamburg	704,669	79,117	12.7
Munich	498,503	87,502	22.4
Leipzig	455,120	55,126	13.8
Breslau	422,415	49,246	13.2
Dresden	395,349	58,909	17.5
Cologne	370,685	49,121	15.2
Frankfort	287,813	58,534	25.5
Nuremberg	260,743	98,357	60.6
Hanover	234,986	24,451	12.1
Magdeburg	229,732	15,308	7.1
Düsseldorf	212,949	36,964	21
Stettin	209,988	69,264	49.2
Chemnitz	206,584	45,567	28.3
Charlottenburg	189,300	56,923	43
Königsberg	187,186	14,390	8.3
Stuttgart	176,318	17,997	11.4
Altona	160,885	11,941	8
Bremen	160,823	18,929	13.3
Halle	156,631	40,327	34.7
Elberfeld	156,503	17,166	12.3
Strassburg	150,268	14,660	17.5
Dortmund	142,418	31,180	28
Barmen	141,435	14,443	11.4
Mannheim	140,384	42,604	43.6
Danzig	138,108	12,503	10
Aix la Chapelle	135,287	24,736	22.2
Brunswick	126,052	10,914	9.5
Posen	116,151	42,912	58.6
Kiel	107,071	21,405	25
Crefeld	106,887	106,529	*0.3
Cassel	105,055	23,703	29.1

*Decrease.

To these may be added Essen, the exact statistics of which have not yet been published, but which are known to have passed the 100,000 limit, its present population being reckoned at 110,000. Berlin naturally leads all German cities in the increased number of its people, but its percentage of increase falls far below those of Nuremberg, Frankfort, Halle, Mannheim, and Posen, all of which owe their rapid growth mainly to the development of manufacturing industries within their respective limits.

The significant decrease in the population of Crefeld is attributable to the fact that it is a city of textile industries—silks, velvets, woolen and cotton goods—which were formerly largely exported to the United States, but which of late years have suffered from the competition of similar goods that are now produced at home for the supply of the American market.

One hundred years ago, Berlin had 169,000 inhabitants; Hamburg, 100,000; Munich, 38,000; Leipzig, 32,000; Breslau, 40,000; and Dresden, 54,000. The first census taken under the Empire, December 1, 1871, found Berlin with 825,389 inhabitants; so that its increase during the past thirty years has been 1,058,956, or considerably more than 100 per cent, and this does not include the population of Charlottenburg, Rixdorf, Friedenau, Wilmersdorf, Steglitz, Panckow, Schoeneberg, and Halensee, all of which suburban cities are inhabited principally by people who do business exclusively in Berlin. Including these suburbs, Berlin would have a population of more than 2,500,000 souls.

Hamburg had, in 1871, 240,251 inhabitants; Breslau, 208,251; Dresden, 177,089; Munich, 169,478; Cologne, 129,233; Frankfort, 90,922; Nuremberg, 82,929; Mannheim, 39,614; and Kiel, 31,747. Charlottenberg, a suburb of Berlin which properly belongs to the capital, had, in 1871, 15,518; so that it has more than quadrupled in population during the past thirty years.

FRANK H. MASON,
Consul-General.

BERLIN, *December 19, 1900.*

PROHIBITION OF GERMAN MEATS BY RUSSIA.

A new and important phase of the meat question has lately arisen: Russia has prohibited the importation of German meats. This action seriously affects one of the principal industries of Brunswick (the manufacture of various kinds of sausage), and the chamber of commerce here has addressed a petition to the Department of the Interior at Berlin, calling attention to the commercial treaty with Russia and claiming that the imports from Germany should not be restricted by any kind of prohibition, and that certain products can

only be excluded under special circumstances, when hygienic or veterinary police regulations come into question. The petition goes on to say:

If article 610 of the Russian tariff act wholly forbids the import of German preparations of swine flesh, we look upon this as an evasion of the commercial treaty with Germany. The fear that trichinosis might be introduced through the importation of German sausage is deprived of any foundation by reason of the legal prescriptions and the scientifically executed trichinæ inspection.

The National Zeitung and the Vossische Zeitung are of the opinion that the prohibition recently issued by the German Government against the importation of foreign meats into Germany has given a weapon to Russia and other foreign countries by which they can ward off the efforts to promote the export of German meats. In regard to the argument that Russia ignores the German inspection for trichinæ, the Brunswick Landeszeitung notes that Russia may appeal to the fact that Germany does not recognize the American meat inspections, although the Americans assert that these are thoroughly trustworthy. It adds:

Such an argument may be regarded as unassailable as to form, but it is really very weak, for Germany can produce proof that between German and American inspection there is as much difference as between night and day. If the Russians made use of this pretext, which would moreover be interfering in our own affairs, they could be easily set right.

It is unfortunate that the proof referred to is not produced. If it were, there would hardly be room for argument, and the purity of Brunswick sausage would be demonstrated beyond question.

TALBOT J. ALBERT,

BRUNSWICK, *November 30, 1900.* *Consul.*

ARTIFICIAL COAL IN GERMANY.

In the Hemshof dye and soda factory, near Mannheim, Germany, is a workman named Montag, who, it is reported, has invented a substitute for coal which costs about 25 cents per 220 pounds to manufacture. Peat is the basis, with the addition of certain chemicals which, up to the present, are the secret of the inventor. Parties who have seen the product burn say that it gives a great heat, burns with a bright flame, and leaves no slag and only a small quantity of white ash. Certain Mannheim capitalists have tried to obtain the secret from the inventor by offering him a position as director in a company to be established, giving him a salary of $4,000 and 2 per cent of the net profits; but he has refused this offer, because he wants to control the sale of the invention himself.

Capitalists now claim that Montag asks too high a price. Mr. Gehrig, the secretary of the Mannheim Chamber of Commerce, has, it is said, undertaken to procure the necessary means to commence the manufacture of the article in partnership with the inventor. They have bought 25 acres of peat land and have bonded 125 more in the vicinity of Hockenheim, where they will erect the necessary buildings, large enough to keep several hundred men at work. It is figured that the daily output will be 60 tons. It is said that the peat is thoroughly dried, ground by a machine, mixed with the chemicals, and pressed into brick shape.

ADOLPH L. FRANKENTHAL,
BERNE, *December 19, 1900.* *Consul.*

THE CARRARA MARBLE INDUSTRY.

The product of the Italian quarries is known and recognized wherever marble is used as embodying all that is best and most desirable in this material. In color and texture, durability, economy in working, soundness, and capability of receiving the highest finish, it can not be surpassed and is rarely equaled. The so-called "Carrara district," embracing the communes of Carrara, Massa, Pietrasanta, Seravezra, Stazrema, and Arni, is the center of this industry. Carrara and Massa are the two most important, the former having a population in the city itself of 21,000 people, with an additional 21,000 in the mountain villages surrounding it and forming part of the commune. These villages are inhabited almost entirely by the quarrymen and laboring class. The commune of Massa has a population of about 24,000. Broadly speaking, the entire male population of these two communities is actively engaged in some branch of the marble industry.

QUARRIES.

There are at present in the district 611 quarries in active operation, of which 345 are at Carrara, 50 at Massa, and the balance distributed among the places named above. In addition to these, there are perhaps double this number which have been opened and afterwards abandoned as being unproductive, or in which, for various reasons, active work has for the time being ceased. Under the sanction of ancient laws, the mountains where the quarries are found are the property and under the direct control of the municipality of the district in which they are located. Applications for leases are made to the syndic of the town, and within a reasonable time, after survey, etc., the concession is granted. The concession is permanent, the only conditions being that the grantee should formally renew it every thirty years, pay the annual rent, and work the property.

The rent is merely nominal, some quarries producing hundreds of tons annually paying but $3 or $4. Failure to pay this for two successive years or to develop the property in the same length of time renders the concession void. Quarries thus leased may be sold or transferred, or left as an inheritance by the grantee at any time, without formal permission from the grantor.

MEANS OF TRANSPORTATION.

Until 1890, the larger part of the output was transported to the local mills or to the Marina by ox team. The Marina, the shipping point for practically all the marble intended for export, is on the sea 6 miles from Carrara. An enormous quantity of blocks and slabs is stored here. Two large piers, double tracked and with hand-power loading cranes, extend out into the sea, and a fleet of small sailing lighters load here for Leghorn, where the marble is placed on the steamers. The exposed position of the Marina renders it impossible to load during bad weather, and many vexatious delays occur in consequence.

The quarry railroad, which had been partially built and opened to traffic in 1876, was completed in 1890. This road, some 15 miles in length, is a marvel of engineering skill. It runs from the Marina to Carrara, connecting at Avenza with the Genoa-Pisa-Rome line of the Mediterranean Railroad. From Carrara, it makes the difficult ascent of the mountains, through many tunnels and over high viaducts, to a point some 1,500 feet above the sea level. Some idea of the obstacles overcome in the construction of this short road may be gained from the fact that it cost to complete about $4,000,000. Although largely patronized by the quarry owners, it has not as yet entirely supplanted the former method of hauling by ox team. The latter, however, is extremely slow, a trip to the Marina occupying the better part of a day. Rates on the railroad vary from $1.16 to $1.81 per ton of approximately 14 cubic feet for the haul to the Marina.

QUARRYING AND HANDLING.

To the ordinary observer, as well as to one well informed in the practical working of the marble quarries in the United States, the system of quarrying, handling, etc., at Carrara appears exceedingly primitive. After a visit to Carrara, one is impressed with the idea that time and money would be saved by the use of modern machinery in the quarries, the adoption of steam cranes or travelers capable of handling blocks of any size easily and quickly, and a transportation system which would not involve so many delays and the rehandling of heavy material. This impression is doubtless a correct one to a certain point, but there is much to be said in favor of the system in vogue at present, which has not changed materially

for hundreds of years. The cheapness of labor, enormous cost of fuel, abruptness of ascent and consequent difficulty of access to many of the higher quarries for heavy machinery, fuel, etc., and the strong inborn opposition on the part of the quarrymen to innovations which threaten to reduce the demand for their services and to disturb the established and time-honored order of things are apparently sufficiently strong arguments to induce quarry owners to continue indefinitely along present lines.

A few years ago, a system of sawing the blocks out of the quarries by the use of an endless wire mounted on standards and pulleys, similar to those employed in some of our quarries in the United States, was introduced. Its use, however, is very limited, and but very few of the quarries have adopted it, the old method of blasting, necessarily causing a large amount of waste, being followed. Months are consumed in drilling by hand the necessary holes for the powder charges. Masses of marble often weighing 4,000 or 5,000 tons are thus loosened and thrown out from the face of the cliff at one discharge; then comes the slow and tedious process of moving this mass into position to be sawn into marketable sizes. This sawing is done by hand power also; a single narrow iron blade fitted into a large wooden frame and operated by two men, one at each end of the frame, with the aid of water and sharp sand, accomplishes the work. Obviously, progress is extremely slow; weeks and even months are consumed in the process.

In the majority of cases, the quarries are far above the points reached by the railroad. The blocks are then placed on skids and lowered down the sides of the mountain by ropes and slings to the loading docks. Here, it would appear, derricks could be used to enormous advantage in placing the marble on the cars; but the loading is done entirely with rollers, skids, and crowbars. Blocks intended for sawing at the local mills are transported thither by either the railroad or ox team; if they are to be exported, they are sent to the Marina.

LABOR EMPLOYED AND COMPENSATION.

The number of men employed varies with the season, but statistics for 1899 show the following results for Carrara and Massa:

Class of work.	Number of workmen.		
	Carrara.	Massa.	Total.
Quarrying	4,363	720	5,083
Transportation and at Marina	615	115	730
Sawmills	610	174	784
Manufacturing, including sculpture	934	91	1,025
Total	6,522	1,100	7,622

The following figures give the rate of wages, which, in comparison with those paid for similar work in the United States, are seen to be extremely low:

	Wages per day.
Quarrymen	$0.38 to $0.77
Mill men	.38 to .48
Cutters	.38 to .68
Polishers	.38 to .68
Carvers	.58 to 1.54
Sculptors	.77 to 1.93

Firms or corporations at Carrara engaged in quarrying number 158; mill owners, 38; exporters, 68; manufacturers and statuary dealers, 60. There are 69 sawmills, with a total of 310 gangs and 30 rubbing beds. Power for these mills is supplied by a small mountain stream from the valleys above.

ANNUAL SHIPMENTS.

Statistics showing the shipments of marble for the past ten years are given in the following table:

Year.	Total shipments.	Total value.	Declared value of shipments to United States.
	Tons.		
1890	161,750	$2,810,900	$364,130
1891	159,455	2,771,200	440,401
1892	169,813	2,980,000	578,279
1893	144,682	2,073,000	691,503
1894	130,077	2,135,600	570,495
1895	150,018	2,592,800	679,128
1896	158,231	2,750,000	681,864
1897	157,644	2,732,000	627,528
1898	179,096	3,062,000	539,952
1899	204,813	3,475,000	557,234
Total	1,615,579	27,382,500	5,730,714

As will be seen by the foregoing, exportations to the United States during the period given slightly exceed 20 per cent of the total shipments. No other country, with the exception of Italy, is so large a buyer. A record of shipments by countries is not available, but, from careful investigation, I believe the following proportions are approximately correct:

	Per cent.
United States	20
England and colonies	15
France	13
Germany	8
Spain and Portugal	5
Italy	20
Other countries	19
Total	100

SELLING PRICES AND EXPENSES OF PRODUCTION.

So much depends on color, quality, etc., of the various marbles produced at Carrara that it is only possible to give the range of prices approximately. The ordinary varieties are quoted from 97 cents to $1.60 per cubic foot f. o. b. Leghorn; the finer grades of statuary blocks, from $3.50 to $7. A variety known as "Bianco P," a fine white grade without veining, the best of which is produced at the Massa quarries, sells at from $1.80 to $4. The finer grades of colored marbles sell as high as $7 per foot.

In considering the cost to the exporter, many things must necessarily be taken into account. Location and proximity to transportation facilities, soundness, depth or thickness of the various veins, with consequent ability or inability to produce blocks of large size, amount of labor necessary to properly open the quarry, are all important factors. A fair estimate of the average cost of actual quarrying is, I believe, 50 cents per cubic foot. Taking this as a basis, the other items of expense are made up of hauling charges, municipal toll, dressing blocks, lighterage, etc., and the total average cost per cubic foot f. o. b. Leghorn is ascertained to be about as follows:

	Cents.
Hauling to Marina by quarry railroad, per cubic foot	11
Municipal toll	2½
Dressing blocks at Marina	3½
Loading on lighters at Marina	2
Lighterage to Leghorn	12
Cost of quarrying	50
Total cost per cubic foot	81

As has been stated, the municipality leases the quarries for a merely nominal sum; it, however, exacts a toll on all block marble shipped of approximately 2½ cents per cubic foot, and on sawed slabs at the rate of 7 cents per ton, or half a cent per cubic foot. Manufactured marble, statuary, and the like are exempt from this tax.

COLORED MARBLES.

Many varieties of colored marbles are also found on the mountains surrounding Carrara. Two varieties of blue, dove-colored marble, known as "Bardiglio" and "Pavonazro," are well known in the United States, the latter especially being largely used and commanding a high price. Some new and very beautiful fancy marbles have recently been discovered near the villages of Gragnana and Castelpoggio, north of Carrara. In the vicinity of Castelpoggio, a very fine variety of red marble is quarried. Some varieties of the well-known black-and-gold marble are found at Monte d'Arni and

Foce, near Carrara. It is similar to that found at Porto Venere, in the Gulf of Spezia, having a densely black ground crossed in all directions by yellow veins. Besides these colored marbles, some fine onyx has been discovered at Monte d'Arni. These quarries are not now in active operation, it being found unprofitable to work them under present conditions. The merchants and exporters of Carrara also deal largely in the well-known Siena yellow marble and the various varieties of Numidian marbles. The latter are brought from the quarries back of Oran, on the northern coast of Algeria.

The extent of its commerce with all nations in its own particular line, with the variety, quality, and beauty of its marbles, justly entitles Carrara to stand at the head of the marble-producing centers of the world. It has occupied this position for centuries and bids fair to continue to do so for many more to come.

JAS. A. SMITH,
Consul.

LEGHORN, *December 6, 1900.*

MALTESE TRADE INFORMATION.

During the past few months, there has been a sudden impetus in trade between Malta and the United States. To-day, more American goods may be found on sale here than for a great many years past, and the outlook seems to indicate that a year from now will see an increase over the present favorable conditions to the extent of at least 50 per cent. Up to two years ago, Malta had been for a very long period without direct communication with the United States. The supply of American goods was very limited and arrived here by purchase in England or by transshipment at other ports. The favorable conditions mentioned above may be directly traced to the establishment of a direct line of steamers between New York and Malta. At first, there must have been some loss to the company (Mediterranean and New York Steamship Company). When the line was established, merchants here were inclined to be skeptical as to its permanency; but when it was seen that the steamers were arriving with reasonable regularity, their views changed and inquiries were made for addresses of American merchants. A generation had passed since the days of the fast American clipper ships, and their disappearance resulted in an almost total extinction of trade in our goods. Necessarily, during this interval, many changes occurred; business conditions altered on both sides of the ocean, and when the present direct line was instituted, there was lack of information as to standing and addresses of business houses.

These addresses having been furnished, there is to-day a large correspondence between merchants of Malta and of the United States. Not only this, but my own mail has grown, and I find one of my most important duties is that of answering American seekers of information as to Maltese trade. On an average, it takes thirteen days for a letter to travel from New York to Malta, and a month may be safely estimated from the time the letter is sent before the reply is received. In order to save as much time as possible, I have prepared a list of a few of the prominent concerns, with their respective lines. Many of the firms and individuals mentioned do not at this date deal in our goods, but I believe correspondence with them on the part of our merchants will in most cases result favorably. I have not included in the list many houses here that are dealing with the United States, for the reason that they are well started, and it is perhaps better to confine my efforts to virgin soil.*

There are quite a number of establishments here that do an extensive business in bottling mineral waters. Several of them hold contracts for supplying the army and navy canteens. The quantity of this class of goods consumed by this trade alone is surprising. The flavors used, in the case of waters that are flavored, comprise lemon and a very poor quality of fruit. I believe that quite a trade in root beer and sarsaparilla extracts might be secured; they would prove a novelty in this market. In sending price lists and correspondence, our merchants should, however, remember that these goods are put up here at very low prices, and quotations should be governed accordingly. It would not be a bad plan to send samples.

In sending circulars and in correspondence, I would state that the English language may be used. In some instances in the above-mentioned lists I have not given street numbers, for the reason that no numbers are used. All of these concerns are located in the capital city of the islands—Valletta, Malta. In the matter of address, I would say that many of the letters I have received of late have shown lack of information on the part of the writers as to the geographical location of Malta. Some of them have been addressed "Malta, Gibraltar," "Malta, Spain," "Malta, Greece," and even "Malta, Africa." A little study of the map will show that the proper address should be "Valletta, Malta."

JOHN H. GROUT,

VALLETTA, *December 13, 1900.* *Consul.*

*A copy of this list has been filed in the Bureau of Foreign Commerce for reference.

IMPORTATION OF DOGS AT MALTA.

New regulations relative to the importation of dogs have just been promulgated in the Official Gazette. They are summarized as follows:

Every person who wishes to import a dog must make an application in writing for the necessary license.

The application must be made by the person who will be the owner of the dog during the period of detention in this country, and it should be forwarded in sufficient time to enable the public health department to make full inquiries into the circumstances and to permit of the decision being communicated to the applicant before the dog is embarked.

Unless the dog to be imported has, at the date of the application, been in the personal charge of the applicant during the preceding three months, the public health department can only authorize its landing under a license, requiring the isolation of the dog for six months at a station approved by the chief of the department, at the expense of the owner, and at his risk.

If, however, the dog has been in applicant's charge for three months, the license requires the detention, on some suitable private premises, where the dog will be under the supervision of the sanitary authority. On the production of a certificate of a veterinary surgeon that the dog is not suspected of rabies, the release of the dog after ninety days may be granted.

During the period of detention, the dog, when temporarily moved for exercise, must be properly muzzled with a wire-cage muzzle, and in charge of a competent person.

Licenses are issued to land performing dogs if the dogs are imported for that purpose only. These licenses require isolation during a period of ninety days, and they must not be taken into any public place unless properly muzzled.

The department can not allow the landing of dogs which are brought by owners visiting Malta.

JOHN H. GROUT,

VALLETTA, *December 22, 1900.* *Consul.*

CURRANTS IN GREECE.

The "Currant Bank of Greece" has in its warehouses about 21,000 tons of fruit.* This quantity can not be exported to the markets of consumption if not transformed into spirit or wine. It is understood that the bank would be disposed to sell all the currants stored in the retention warehouses, as well as three-fourths of the quantity annually retained (an average of 15,000 tons), at a low price (perhaps $18 to $20 per ton), to a company which would establish

*See ADVANCE SHEETS No. 840, September 22, 1900 (CONSULAR REPORTS No. 242, November, 1900), for explanation of the retention of currants in warehouses.

manufactories in Greece in which currants could be transformed into wine or spirit and then exported. Currants are considered among the best raw materials for spirits and wines, and several Greek and foreign companies are going to make offers.

I shall be glad to furnish further information to anyone desiring it.

D. MAXIMOS,
Vice-Consul.

PATRAS, *November 27, 1900.*

FOREIGN CARPETS IN TURKEY.

According to a German trade journal, large quantities of carpets are imported into Turkey. Great Britain supplies by far the greater part of these carpets, including the so-called Brussels carpets and small foot rugs. Some time ago, a large Austrian carpet house tried to imitate the English carpets which are sold in Constantinople, but failed.

From France are chiefly imported fancy carpets and rugs of the better grades. A French house has also imitated the English goods, and, as regards the better grades of velvets and Brussels, the attempt has been entirely successful. In tapestry carpets, however, the colors were not as bright as those of English make.

The sizes demanded are from 60 to 136 and 149 to 195 yards long, with widths of 68 and 136 centimeters (26.77 to 53.54 inches), respectively. The call for the wider carpets is the greater. Rugs of various sizes are also in demand.

The designs mostly requested are flower and leaf and checkered and striped patterns, all in clear, distinct colors; oriental patterns, especially Persian, are also popular.

In small foot rugs, the taste is for designs of flowers, animals (such as lions, tigers, etc.), landscapes, and illustrations of biblical history.

The English carpets chiefly imported are the following:

Felt carpets.—Pieces of 55 to 60 yards by 36 to 66 inches wide, at prices ranging from 7½d. to 22d. (15 to 44 cents) per yard, according to quality and width.

Jute carpets.—Pieces of 60 to 64 yards, in extreme widths; otherwise only 30 to 34 yards by one-half, five-eighths, three-fourths, and 1 yard wide, at prices from 2s. to 7s. (48 cents to $1.70); rugs, 1½ by 2, 2 by 2½ to 4 by 5¼ yards, at prices ranging from 1s. to 49s. (24 cents to $11.92).

Tapestry carpets.—Pieces of from 55 to 60 yards in length by 18, 22½, 27, and 54 inches in width, at prices from 9½d. to 4s. (19 to 97 cents), according to width and quality.

Brussels carpets.—Pieces of from 30 to 60 yards in length by 27 inches in width, at prices from 2s. 5d. to 3s. 6d. (58 to 85 cents); rugs, 1½ by 2¼ to 4 by 4½ yards, at prices from 8s. to 28s. ($1.94 to $6 80).

Velvets.—Pieces of 30 to 60 yards by 27 to 54 inches wide, at prices of from 2s. to 5s. 6d. (48 cents to $1.33); rugs, 1½ by 2¼ to 4 by 6 yards, at 7¾s. to 53s. ($1.88 to $12.89).

WALTER SCHUMANN,

MAINZ, *December 19, 1900.* *Consul.*

SYRIAN TEXTILE IMPORTS.

A German trade journal says that textile goods take the lead in the imports of Syria, the cheaper cotton goods—such as T cloth, gray cloth, shirtings, madapolams, printed calicoes, printed handkerchiefs, muslins, etc.—from Great Britain dominating the market. Italy has been successful in gaining a foothold in Syria for a number of textiles, such as upholstery goods, printed cottons, silk goods, etc., and has practically crowded out all competitors in knit woolen and cotton underwear.

In Syrian dry-goods stores, the following articles are found: Figured cotton flannels (almost exclusively from Austria), printed cotton flannels and fast-colored printed calicoes (of Alsatian and Italian make), plain and figured woolen dress goods (from Saxony and Roubaix); figured upholstery goods, especially damask (from France and Italy); so-called "haberas," or smooth whole-silk black goods for women's dress skirts, in two qualities—satin de Chine and satin de Lyons; smooth half-silk white and colored dress goods, watered and figured whole-silk dress goods, half-silk colored "Cordonets serges," and light Japanese silks. The silks are to be had in various colors. Lyons takes the lead in the silk exports to Syria, with Italy (Como) second. Germany, whose exports to Syria in damasks, half-silk velvets, and brocades were formerly quite important, is no longer a factor.

Austria still has the monopoly in the Syrian markets for the one-colored so-called oriental cloth. No other country has so far been able to manufacture this kind of cloth as cheaply as Galicia and Austrian Silesia. It is a cloth dyed in the wool and called Masson, Elbeuf, Electoral, Imperial, and Saxonia. The sale in Damascus is large, but decreasing, owing to the competition of the cheaper English woolen and half-woolen goods (presidents, meltons, army cloth, seal skin, and castor). These English goods, which are sold at from 5d. to 3s. (10 to 73 cents) per yard, are chiefly used by the peasants for winter clothing.

Reichenberg supplies the fine-grade, smooth black and dark-blue cloth.

In material for men's clothing, Belgium leads in the Syrian market, Belgian goods being very reasonable in price and meeting the Syrian taste more perfectly than any other. Germany, however, is making great efforts to compete. In 1899, stockinet, which is a specialty of Belgium, was in good demand.

The following woven fabrics find a market in Syria: Woolen and cotton lining material, among which is Italian cloth, from Germany and England; linen lining materials, paper muslin, piqué, checkered flannel shawls with fringes, from Bavaria; printed kerchiefs, called "jasma," a specialty of Switzerland, and cotton and linen mattress coverings.

The not unimportant trade in men's ready-made clothing is entirely in the hands of Austrian manufacturers, whereas Berlin has the monopoly in ladies' ready-made dresses, in which the trade, however, is not very large.

Body linen comes chiefly from Austria, whereas in sporting shirts (of very inferior quality, however), both Germany and Austria share the trade.

The large knitting works of Saxony supply the Syrian hosiery trade.

Barring one fez factory in Constantinople, all Turkish caps are manufactured in Austria. These factories, together with the one at Constantinople, have recently formed a trust, and the prices for this Turkish national head gear have in consequence become so high that there seems to be a good opportunity for American competition.

WALTER SCHUMANN,

MAINZ, *December 22, 1900.* *Consul.*

HINTS TO EXPORTERS OF WOOLEN GOODS.

According to a Belgian report, blankets made of shoddy and expressly intended for the trade with the Kaffirs find a ready sale in South Africa. These blankets, which are known in South Africa as "kugs," are of English origin, manufactured in the vicinity of Dewsbury. In 1899, the imports into Africa of this article amounted to £73,812 ($359,206.10), and in 1897 to £84,389 ($410,679.07). The sizes vary from 64 by 68 inches to 72 by 84 inches and the weight from 4½ to 5 pounds. Three or four different qualities are manufactured. The blankets usually have broad stripes of red, yellow, and blue colors. The large importing houses in South Africa usually make their purchases through London, Manchester, and Liverpool.

In central Asia, woolen shawls of European manufacture find a ready sale. The trade in merino shawls in Tibet bids fair to develop into a profitable business. The shawls come from France and Germany, and, being very cheap, are readily sold. They even seem to be supplanting the better, but much dearer, "pashminas," or cashmere shawls.

WALTER SCHUMANN,

MAINZ, *December 19, 1900.* *Consul.*

RISE IN COAL PRICES IN THE LEVANT.

The chief shipping companies of the Levant were represented at a recent conference in Brussels, convoked to consider the question of meeting the increased cost of coal and working expenses. Among other matters, reports the Egyptian Gazette, a surtax or primage charge of 10 per cent on the passenger rates was accepted. In principle, it was decided to agree to a primage charge on all bills of lading. Cargo rates are likewise to be materially raised. It would seem that the rise in coal, which affects Levant shipping companies so disastrously and will no doubt prove a disagreeable factor in the calculations of the European exporter to the Levant, is a point in favor of American shipping and American shipments to these parts.

Speaking of coal, I beg to repeat that American coal-dust briquettes have been in demand here for some time. I have, however, received evasive replies to letters on this subject addressed to coal companies in the United States. This mystery seems to be cleared up by an article in the New York Tribune of October 10, which maintains that it is only within a few months that a satisfactory briquette has been produced in America, and promises that, since the problem has been finally solved, and apparently solved even more effectually than in Europe, American briquettes will soon appear in the markets of the world.

As to the briquettes used in Syria by thousands of tons in the silk factories, on the railroads, at the gas works, etc., they are rectangular pieces of pressed coal dust and pitch, weighing from 10 to 15 pounds each, all manufactured in Cardiff. Samples of American briquettes may be sent to Fr. Wehner or H. Sabbag & fils, in Beirut.

G. BIE RAVNDAL,

BEIRUT, *November 15, 1900.* *Consul.*

TRAFFIC IN THE SUEZ CANAL IN 1899.

It appears from the last annual report of the board of managers of the Suez Canal Company that there was a substantial increase in the traffic of the canal during 1899,* as compared with the year previous, especially in the total tonnage of vessels. In 1898, the number of vessels that passed through the canal was 3,503, with an aggregate burden of 9,238,603 tons, whereas in 1899 the number was 3,607 vessels, representing an aggregate burden of 9,895,630 tons. This is a gain of 104 vessels and 657,017 tons. The average burden of vessels increased from 2,637 tons to 2,743 tons.

The average time consumed in passing through the canal during the year 1899 was eighteen hours and thirty-eight minutes, an increase of thirty-eight minutes as compared with 1898. This increase is accounted for by the fact that vessels passing through the canal under quarantine are compelled to avoid any contact with the land, and must stop at night if not provided with electric headlights. However, the time actually consumed by vessels in steaming through the canal was less in 1899 than the year previous, having been reduced from fifteen hours and forty-three minutes to fifteen hours and forty-one minutes. Last year 3,273 vessels, being provided with electric lights, were able to pass through the canal at night. These vessels formed 90 per cent of the whole number, against 94 per cent in 1898.

It is worthy of note that only 327 steamers passed through the canal for the first time.

FREDK. W. HOSSFELD,

TRIESTE, *November 28, 1900.* *Consul.*

RAFIA FIBER IN MADAGASCAR.†

Rofia, or as it is generally spelled in commerce "raffia" or "rafia," is the Malagasy name of a palm which furnishes a staple article of commerce called rafia fiber. It is indigenous to Madagascar, and is to be met with everywhere on the coasts, needing no cultivation or attention of any kind. It is not a stately palm, but sends its enormous branches from near the ground; in a fine specimen, one branch is almost a tree in itself. The rib of each branch is as much as 20 feet long, of a pearly gray color, smooth and shiny, flat on the inner

* See ADVANCE SHEETS No. 722, May 5 (CONSULAR REPORTS No. 237, June, 1900), for tables.

† This report was made in response to inquiries by a New York firm, which has received advance copy thereof.

surface, but otherwise round, without any knots, and so hard that in perhaps nine cases out of ten a rifle ball would rebound therefrom. At the base it is as large as an ordinary champagne bottle and tapers to a point at the top. The inside consists of a light pith, which can be split into layers of any thickness. Possibly it is this or an analogous production which is used for making pith helmets in the East.

Naturally, these ribs combine great strength with wonderful lightness, and are used for shafts for "filanjanas," or palanquins, ladders, and other purposes, but otherwise have no particular commercial value.

It is the pinnifoliate of these branches which produce the rafia fiber of commerce. One palm branch, or frond, will produce eighty or one hundred long green leaves from 2 to 5 feet in length, like the leaves of the sugar cane, but of a dark, lustrous green and thicker and stiffer. These, again, contain a round and pliant rib, which the natives utilize for making baskets and dredges for catching small fish and shrimps in the rivers after they have stripped off the green part which furnishes the fiber.

The under part of this green leaf (which is not exposed to the light, as it remains folded) is of a pale greenish-yellow color, and from that side the inner skin can be peeled off in the same manner as the skin on the outside of a pea pod, except that it peels off straight to the tip without breaking. It is then of the palest green, and after being dried in the sun assumes a light straw color. This is the rafia fiber of commerce.

It was originally exploited by the natives for use in articles of clothing. The men bring in the fronds and women and girls weave it on handlooms of any coarseness or fineness. Woven just as it is peeled off from the fronds, it forms a kind of sacking used for wrapping goods, while the perfection of the art, as known by the Hovas only, is to weave a tissue of which the warp is rafia fiber split infinitesimally fine, and the weft of white silk. This gives an article called silk lamba, which brings fancy prices in Europe and America. The coast tribes use it for clothing, but of mediocre fineness, with dyed stripes of indigo, saffron, black, and a dirty green. It is a cold, comfortless-looking material and refuses to adapt itself to any folds that a sculptor would care to copy; and when two natives come down the street clad in brand new rafia shirts they produce a noise similar to that of two wire meat covers rubbing together.

Rafia fiber is now used in the market, I understand, entirely by nurserymen, gardeners, etc., for tying up vines and flowers, and possibly for grafting. It possesses the advantages of being as soft as silk and is not affected by moisture or change of temperature so

as to risk cutting or wounding the most delicate tendrils; and it does not break or ravel when folded or knotted. These qualities bring it into use all over Europe and consequently maintain its price. It is virtually inexhaustible in Madagascar, the supply being limited only by the scarcity of labor.

For export, the fiber is merely collected in large skeins, twisted up or plaited, and then baled like raw cotton.

Madagascar exports about 20,000 bales annually, and the present prices range from 78 to 80 francs ($15.05 to $15.44) per bale f. o. b. New York.

WILLIAM H. HUNT,
Vice-Consul.

TAMATAVE, *November 3, 1900.*

TRANSPORTATION IN THE KONGO.

The department of marine and public works in the Kongo Free State has made considerable improvements in the means of intercourse, as well on the rivers as on the sea, between Boma, Matadi, Angola, and the French coast. The Messageries Fluviales, of the Kongo, have opened offices at Matadi, Brazzaville, and Messo and carry goods as far as Brazzaville, situated on the banks of the French Kongo, from any of the following European ports: Bordeaux, Antwerp, Hamburg, or Liverpool. The freight rates on the Kongo River and its auxiliaries, as well as the charges for reloading and unloading, will soon be published. On the Middle Kongo, three wood stations have been established by the Government to enable steamers plying on the river to take in fuel.

As regards the project to make the Kingussi Canal navigable for small steamboats, the commissary of the Kwango district reports that the dredging is progressing favorably and that already, in September last, the bottom of the canal was 30 centimeters (11.8 inches) below the lowest watermark. For a distance of 1,200 meters (3,937 feet) the canal will run in quite a straight line, and there will be no obstacles to navigation in the shape of rocks, etc. It is expected that after the 1st of November, 1900, 10-ton steamers will be able to use it, even during the dry season. The first trials of the kind of steamboat necessary for the navigation of the Kwango River will be made immediately after that date, under the personal supervision of Mr. Costerman, the Government inspector in charge. The Kwango district will then be connected with Stanley Pool by a direct river route, while previously goods had to go a roundabout way on the backs of native carriers.

OLIVER J. D. HUGHES,
Consul.

COBURG, *December 8, 1900.*

INDIAN CORN IN THE GERMAN COLONIES.

The German Colonial Association is soliciting the Government to take steps toward introducing and protecting on a large scale the growth of indian corn in some of the German colonies. The German Empire imports about $32,000,000 worth of corn every year, the major part of which comes from the United States.

If the soil and climate of any one of the colonies should be favorable to the growth of indian corn, such a step would no doubt be of some importance to that particular colony. But should any of these colonies be able to produce the corn which grows in the Mississippi Valley (which is not apt to be the case), it will be many years before the American farmer need fear competition from this source. The Woermann Line, which plies between Hamburg and Togo, charges $9.50 per ton for freightage between these points. The North German Lloyd charges on the average $2.75 per ton from New York or Baltimore to Bremen. Very often, large quantities of corn from the United States are taken gratis as ballast. Until Germany has better shipping facilities with her colonies, the freight on corn will amount to as much as the original price of corn per ton in America.

To make good this difference in a degree, the Colonial Association proposes to admit corn from the German colonies free of duty. In 1899, the Government's income from the duty on corn amounted to $7,740,000. The duty on corn imported from the colonies amounted to $1,430.

ERNEST L. HARRIS,
Consular Agent.

EIBENSTOCK, *December 1, 1900.*

QUININE AUCTION AT BATAVIA.

Vice-Consul Rairden writes from Batavia, November 6, 1900, that the sixth public auction sale of quinine was held at the Merchant's Exchange on the 31st of October, 1900, and the following were the prices realized:

(1) Editio I, consisting of 3,175.2 kilograms (7,000 pounds) in lots of 2 cases containing 8 tins with 22.68 kilograms (65.02 pounds); sold at 23.45 and 24.60 florins ($9.43 and $9.89) per kilogram (2.2046 pounds).

(2) Editio II, consisting of 750 kilograms (1,653 pounds) in lots not less than 22.68 kilograms (50.2 pounds), and not above 25 kilograms (55.11 pounds) in weight, packing at purchaser's option; sold at 23.45 and 24.60 florins ($9.43 and $9.89) per kilogram.

The average price realized, 24.34 florins ($9.78), equals the unit price of 0.0992 florin (3.98 cents) for the bark at Amsterdam.

(3) Editio III, consisting of 120 kilograms (264.5 pounds) in five lots of one case of 24 tins of 1 kilogram each (52.9 pounds). Two lots were sold at 28 florins ($11.26) per kilogram, but the remaining three lots, not realizing the limit, were not sold.

Although there were few buyers and the bidding was slow, says Mr. Rairden, fair prices were realized.

WAGES AND PRICES IN SIAM.

WAGES.

The following table will give a fair idea of the wages paid in Siam to-day. These facts are not taken from tables of statistics, as Siam collects no data on labor and wages, nor are they the statements of a single man or a set of men. They are the results rather of personal and careful investigation and questioning. Not only were employers and employees themselves interviewed, but men in all stations and of many interests.

Description.	Wages in gold.	Description.	Wages in gold.
Engineers.....per day...	$0.62½ to $0.75	Bricklayers.....per day...	$0.30 to $0.40
Blacksmiths.....do.....	.62½ to .75	Laborers.....do.....	.15 to .30
Pitters.....do.....	.62½ to .75	Tailors for gentlemen...do.....	.50
Boiler makers.....do.....	.62½ to .75	Tailors for ladies.....do.....	.50
Cabinetmakers.....do.....	.30 to .40	Farm hands.....per season...	*12.00 to *13.00
Carpenters.....do.....	.30 to .40		

*And found.

Outside of farm labor, this represents wages paid in the city of Bangkok. These rates are considered so high that they are attracting thousands from the fields, the forests, and the smaller cities and towns of Siam and thousands more from Hongkong, Swatow, and Singapore every year. Further, it is but just to say that the figures here given are decidedly colored for the better by the fact that the King of Siam is just now converting a large tract of jungle waste on the immediate confines of the city into a royal park. In this park, he is building palaces, stables, cottages, and conservatories, all of which improvements have materially affected the labor market and will continue to do so for a year to come.

PRICES.

The following table gives the prices that obtain in Bangkok for articles of food:

Articles.	Price in gold.	Articles.	Price in gold.
Butter.....per pound...	$0.30 to $0.45	Mutton.....per pound...	$0.25
Lard.....do,.....	.25 to .32½	Sugar.....do.....	$0.06 to .08½
Flour.....do.....	.07½ to .12	Pork.....do.....	.08½
Tea.....do.....	.13 to .45	Eggs.....per dozen...	.12 to .18
Coffee.....do.....	.28 to .32½	Chickens.....each...	.15 to .30
Canned goods.....per can...	.20 to .30	Ducks.....do.....	.20 to .30
Ham.....per pound...	.23 to .45	Geese.....do.....	1.50
Bacon.....do.....	.23 to .45	Turkeys.....do.....	2.50 to 5.00

It goes without saying that these articles do not enter into the living of the laboring man or the mechanic to any great extent, although native pork forms a very considerable portion of the food of the Chinese, who represent the majority of the mechanics here.

LIVING.

One who has never been outside of the United States can hardly form in his imagination a picture of what living means to the plain people in this country. The price of furniture, such as one finds in the home of the laboring man in America, runs about as follows: Chair, from 90 cents to $3; bedstead, $9 to $15; mattress, $4.50 to $9; dining table, $6 to $10. The laborer with wages from 15 to 30 cents a day sits upon the floor in his home, sleeps upon a grass mat, cooks on a box of earth or an earthen crock for a stove, and eats his rice, fish, and simple vegetables out of the same dish with his family, without fork or knife or spoon. Eggs, which are very cheap, he has at times; chicken on rare occasions, and I think I am safe in saying that beef is almost unknown in the common laborer's meal.

His house is a bamboo structure with a tap roof, and generally consists of one small room about 10 feet square, which is sometimes divided by a low partition. Within these rough walls and on a floor of rough boards or split bamboo, he and his wife and his family eat and cook and sleep. The clothing of himself and family is the most meager; a cloth around the loins—the woman generally wears a cloth around the breast also—no shoes, seldom a covering for the head, holiday and working-day alike. The more fortunate on festive occasions may indulge in a piece of bright-colored cotton cloth thrown about their shoulders.

It is not necessary to say that, in connection with such an existence, the terms library and school and church and comforts are out of place. While the Siamese bathe more frequently than other

people, and to all outward appearance are the most cleanly of persons, the contracted and meager condition of the poor man's home renders it most filthy and unsanitary. Nature is most kind in this tropical climate, and yet, with all her gentleness, the death rate among the poor is enormous. So much for the laborer and his family.

The mechanics differ from the laboring class in that they live together, more closely packed, as tenants, in large bamboo or wooden houses that modern ideas have brought into the city. They also have nothing in their homes that could be called furniture, but their food is more substantial. The employers tell me that a mechanic could not do his work and subsist on the diet upon which the laborers live. Yet the mechanic's table can not be compared with that of the humblest laborer in America.

RELATIVE ADVANCE OF WAGES AND PRICES.

It is interesting to note that, while wages have advanced during the last twenty years some 75 or 80 per cent, the eight staple articles upon which the natives depend for food—rice, fresh and dried fish, ripe and green cocoanuts, salt, bananas, and dried chiles—have each advanced anywhere from 157 to 715 per cent, or an average of 309 per cent, during the same time.

HAMILTON KING,
Consul-General.

BANGKOK, *November 18, 1900.*

CABLE TO AUSTRALIA.

Under date of November 29, 1900, Consul-General Bray, of Melbourne, writes:

The postmaster-general of Victoria announces that the tender of the Telegraph Construction and Maintenance Company, of London, has been accepted for the laying of the Pacific cable, at a cost of £1,795,000 ($8,735,367), the installation and surveying to cost £204,000 ($992,766), making a total cost of the cable when completed of £1,999,000 ($9,728,133). The cable is to be completed and in working order by the 31st of July, 1902, provided the company is allowed to start laying the Australian section first. The Australian section comprises cables from the New South Wales and New Zealand coasts to Norfolk Island and thence to Fiji. The other section will be from Fiji to Fanning Island and thence to Vancouver, British Columbia. When completed, it is anticipated this cable will materially reduce the existing charges to the United States.

With a previous report, Mr. Bray inclosed a clipping from the Age, of Melbourne, giving the following details in regard to the cable:

The route decided upon is from Vancouver via Fanning or Palmyra Island, Fiji, and Norfolk Island, with branches from the last-named station to Auckland, New Zealand, and Queensland. The length of the cable over this route would be, allowing 10 per cent for "slack" actually used, 7,986 nautical miles, viz: Vancouver to Fanning Island, 3,561 miles; Fanning Island to Fiji, 2,093 miles; Fiji to Norfolk Island, 961 miles; Norfolk Island to New Zealand, 537 miles; and Norfolk Island to Queensland, 834 miles. Some 1,900 soundings over 500 fathoms in depth have been made, which relate directly to the route along the bed of the ocean, the greatest depth being 3,200 fathoms, but the general average much less.

It is estimated that with the use of 650 pounds of copper and 400 pounds of gutta-percha, 1,940,000 words might be transmitted in a year. Great Britain and Canada have agreed to defray five-ninths of the total cost; New Zealand, one-eighth; and New South Wales, Queensland, and Victoria have pledged themselves to contribute the remainder between them.

As to the revenue to be derived from the cable, it is anticipated that the returns for the first year, on a tariff of 2s. (49 cents) a word, will be £109,807 ($534,376), and that by the fourth year of its working the cable will become a paying concern. It has been proposed to charge 3s. (73 cents) a word for messages right through—that is, crossing Canada and the Atlantic, in addition to the Pacific—and 2s. (49 cents) for the Pacific cable section.

ARGENTINE TRADE IN 1900.

Minister Lord sends from Buenos Ayres, November 15, 1900, the following statement of trade in the Argentine Republic for the first nine months of the year 1900, as compared with the same period in 1899:*

Imports and exports.	January-September—	
	1899.	1900.
Imports	$87,670,936	$87,461,371
Exports	117,617,798	122,518,293
Total	205,288,734	209,979,664

Mr. Lord adds:

The decrease of imports was $209,565 and the increase of exports $4,900,495, or a net increase of the foreign commerce of the Argentine Republic of $4,690,930 in the first nine months of this year as compared with the first nine months of the year 1899.

The following table shows the countries participating in the imports of this country during the periods mentioned:

* The values given throughout this report are in gold.

Whence imported.	January-September—		Increase in 1900.	Decrease in 1900.
	1899.	1900.		
Germany	$10,024,511	$12,556,877	$2,532,366	
West Indies	32,725	17,830		$14,895
Belgium	7,062,092	6,985,157		76,935
Bolivia	58,886	92,042	33,156	
Brazil	3,588,117	2,882,373		705,744
Chile	107,120	114,465	7,345	
Spain	2,355,597	2,854,622	499,025	
United States	10,800,826	9,321,475		1,479,351
France	8,394,605	8,724,739	330,134	
Italy	10,666,610	11,699,364	1,032,754	
Netherlands	107,365	136,317	28,952	
Paraguay	1,119,770	1,371,337	251,567	
United Kingdom	32,761,595	30,141,521		2,620,074
Uruguay	378,758	385,611	6,853	
Other countries	212,359	177,641		34,718
Total	87,670,936	87,461,371	4,722,152	4,931,717

The classes of imports for the same periods were as follows:

Articles.	January-September—	
	1899.	1900.
Live animals	$385,438	$268,824
Food stuffs:		
Animal	1,173,172	1,409,999
Vegetable	7,104,917	6,627,752
Tobacco	2,631,399	2,336,166
Beverages:		
Wines	4,329,612	4,321,772
Spirits and liquors	697,472	991,507
Other beverages	225,944	233,761
Textiles and manufactures of:		
Silk	1,957,836	2,073,328
Woolen	6,443,365	6,088,932
Cotton	14,861,595	16,479,071
Other textile fabrics	7,147,290	5,622,815
Oils	2,976,183	3,229,572
Chemicals and drugs	2,666,997	2,842,307
Dyes and colors	618,589	692,872
Lumber	4,456,079	4,092,303
Manufactured wood	1,002,513	1,143,665
Paper	1,437,022	1,399,856
Manufactured paper	605,150	773,320
Leather and manufactures of	877,557	991,166
Iron and manufactures of:		
Raw	6,342,616	7,367,938
Machinery and tools	1,429,549	917,183
Other manufactures of iron and steel	5,363,637	6,073,920
Other metals:		
Raw	1,018,326	1,014,529
Manufactured	1,431,171	1,570,965
Crockery and ceramic products:		
Raw	6,863,348	5,259,528
Manufactured	1,218,575	1,312,338
Miscellaneous	2,398,584	2,325,982
Total	87,670,936	87,461,371

The following table shows the countries which participated in the exports from this Republic for the first nine months of the years 1899 and 1900:

Whither exported.	January-September—		Increase in 1900.	Decrease in 1900.
	1899.	1900.		
Africa	$412,395	$2,518,388	$2,105,993	.....
Germany	17,592,597	16,511,128	.....	$1,081,469
West Indies	147,455	246,438	98,983	.....
Belgium	15,850,832	16,169,445	318,613	.....
Bolivia	299,758	530,368	230,610	.....
Brazil	4,970,928	4,045,250	.....	925,678
Chile	223,681	574,968	351,287	.....
Spain	1,144,196	1,722,684	578,488	.....
United States	4,788,713	4,733,185	.....	55,528
France	21,637,098	14,550,856	.....	7,086,242
Italy	2,805,844	3,213,665	407,821	.....
Netherlands	1,287,739	3,515,111	2,227,372	.....
Paraguay	137,169	134,082	.....	3,087
United Kingdom	15,546,384	16,432,653	886,269	.....
Uruguay	2,904,192	1,728,415	.....	1,175,777
Other countries	5,984,723	5,625,345	.....	359,378
To orders	21,886,094	30,266,312	8,382,218	.....
Total	117,617,798	122,518,293	15,587,654	10,687,159

The classes of exports for the periods mentioned were as follows:

Articles.	January-September—	
	1899.	1900.
Pastoral products:		
Live stock	$7,214,932	$5,313,654
Wool and hides, etc	53,969,156	44,076,978
Manufactured articles from animal products	2,860,610	2,674,966
Animal refuse	373,186	502,062
Agricultural products:		
Raw materials	46,550,721	62,454,875
Manufactured materials	3,062,850	1,988,486
Vegetable refuse	743,533	1,052,014
Woods and products therefrom	1,471,127	2,738,355
Minerals	162,088	165,086
Hunting products	526,883	642,902
Miscellaneous	682,712	908,915
Total	117,617,798	122,518,293

The noticeable features of these returns are a decrease of imports from the United Kingdom and the United States and a sensible increase from Germany and Italy. The increase of imports from Italy is due to the large Italian population here who consume her products; but Germany's increase over the United Kingdom indicates an inroad upon British trade, as these imports are of a similar character.

Under date of November 19, 1900, Mr. Lord says that the Argentine Congress closed its session without altering the customs duties. The trade-mark law was amended to increase its restrictions and make it more effective.

BRAZILIAN CONSÚLAR INVOICES.

Vice-Consul-General Lowrie, of Rio de Janeiro, under date of November 22, 1900, reports that the consular-invoice law of Brazil will be put into effect January 1, 1901. An effort, he adds, is being made by a number of business houses to have the law annulled.

In a previous report, Mr. Lowrie sent a translation (printed) of the general principles of the law, as follows:

All merchandise, including specie and bullion, dispatched from foreign countries for Brazilian ports must be accompanied by the corresponding consular invoices, with the exceptions enumerated in article 3.

These invoices may be made out in Portuguese or in the language in use at the port of shipment, and must be legalized exclusively at that port.

The declarations contained in the invoice shall determine:

(1) Name of the ship in which the goods are shipped.

(2) Port of shipment.

(3) Port of destination.

(4) Value of the goods.

(5) Freight and expenses.

(6) Premium on the money current at the port of shipment, if any.

On the back of the invoice the goods are to be detailed, giving marks and numbers of the packages, specifications of the merchandise, its net and gross weight, value, including or excluding freight and expenses, of each different kind of goods, and country of origin of same.

These data are obligatory, including the statement of approximate freight and expenses, and omissions will make consignees liable to fines.

Description of the merchandise may be either specific, giving the name of each separate article, with the material of which it is composed; or may be generic, in accordance with the official nomenclature organized for that purpose. It is, however, absolutely forbidden to make use of generalizations, such as "cotton textiles," "ironware," etc., not admitted in this nomenclature. Infringement in this respect will subject the consignee to fines.

Translations have been prepared of the nomenclature and regulations into English, French, German, Italian, and Spanish and will be shortly available.

Although declaration of origin is exacted, proofs will not be demanded at present, nor until a differential tariff be enforced against the goods of any country, of which there is no immediate prospect.

The routine to be followed with regard to these invoices is as follows:

(1) The invoice must be filled up by the merchant and forwarded to his agent (if shipped at another place) to be legalized (visaed) at that consulate. The original, of which three copies are to be made, must be stamped and, after being visaed, be handed to the shipper to be forwarded with the bill of lading to the master of the

vessel, who, in his turn, must return it with the corresponding invoice and manifest to the consul to be forwarded to the respective custom-house. The captain must note in the margin of his manifest any goods shipped for which no invoices have been received, his notes being certified to by the consul, as also the cause of nonreception of the invoices by the captain. On this being done, the captain will have no further responsibility on arrival; otherwise he will be liable to fine for nondelivery of invoice.

(2) Of the three copies of the original invoice, one will be forwarded by the consul to the statistical bureau, a second will be retained at the consulate, and the third handed to the shipper to be forwarded to the consignee to accompany dispatch of the goods at the custom-house. Without the corresponding invoice, no dispatch can be granted except on signature of a bond (termo de responsabilidade).

(3) The declaration of the invoice may be made in the language used at the port of shipment or in Portuguese, as desired, a translation of same being in the former case presented by the consignee on dispatch of goods at the custom-house; this translation need not necessarily be by public translator.

The fee for legalization of consular invoices will, for the current year, be 5 milreis gold ($2.73), payable in stamps to be applied to the original only. This, of course, does not exempt from payment of the tax on bills of lading (2 milreis). It is, however, proposed to reduce the dues for consular invoices to 3 milreis ($1.64) only, and an amendment to that effect has been introduced into the estimates by the Senate.

ICE AND REFRIGERATORS IN BRAZIL.

The consumption of ice in Santos, and, indeed, in the State of Sao Paulo generally, is increasing every day. This is due principally to the unceasing demand for ice in the restaurants, hotels, and other public places where drinks are served. Foreigners—chiefly Americans, Englishmen, and Germans—who are unaccustomed to a tropical climate are loudest in the call for this commodity. No doubt, the use of ice would be far more general if companies similar to those in the United States were organized, to deliver it from house to house. In my opinion, the organization of an ice company here in Santos would prove a profitable undertaking. I visited the fish markets a few weeks ago and, to my great surprise, discovered that the use of ice was almost unknown there. One dealer informed me, in answer to my inquiry, that ice was not only too dear, but was very difficult to procure. The same conditions exist in the vegetable and meat markets, and it is not surprising that by the end of the day everything in the nature of fresh meat and fish should be pretty well cooked by the heat of this tropical region. I have no doubt but that a large quantity of ice could also be sold to vessels arriving and departing from Santos.

I believe also that American refrigerators would sell well in Brazil. In this State, only the best hotels have refrigerators, though they are beginning to be employed in a few saloons, where they have

been found most useful and convenient. So far, however, they have not been introduced to any extent in private houses. When I say that only about one out of twenty meat dealers uses refrigerators, one may judge of the opening here for these useful articles. Properly introduced, there is no reason why they should not meet with a ready sale.

JOHN J. GIRIMONDI,
Consul.

SANTOS, *November 24, 1900.*

REDUCTION OF COPPER ORE IN PERU.

The secretary of legation at Lima, Mr. Neill, sends under date of December 14, 1900, translation of a newspaper article concerning the formation of a company for the reduction of copper ores, as follows:

Messrs. Victor Pezet and Juan Torrico y Mesa have published a pamphlet the title of which is The Company for the Reduction of Ores and Copper Mattes, of which we have received a copy. The said gentlemen offer to the mining industry a new enterprise, which they propose to establish in this country on a grand scale, the object of which is the reduction in the principal mining districts of copper mattes into bars of pure copper, by the Mauhés process or by bessemerization, having recently obtained the privilege of introducing the same in the Republic.

Messrs. Pezet and Torrico y Mesa's initiative is of the highest importance to the development of our young mining industry, and will in a special manner give a powerful impulse to the exploitation of copper ores in Peru, an industry which, notwithstanding the high price of this metal at the moment, is limited to the working of rich mines, due to the heavy expense of transport from the mining centers to the reducing offices in Europe.

The complete reduction, when established in the mining districts, will solve the problem by facilitating the exploitation of low-grades ores, which are those that most abound, and thus innumerable mines of low-grade ores now abandoned will be reopened, giving life and wealth to regions now desolate and even to those now being worked, from whose ores strange substances will be eliminated, thus reducing the freight charges.

The patented process can not be more simple and economical in its working, it being all the more recommended on account of the class of copper ores that most abound in Peru, such as sulphurates and sulphates.

The fundamental conditions of the new exploitation process are two, viz:

First. The production of pure copper, instead of rich mattes that always contain from 30 to 40 per cent of alloy (foreign substances) and the freight of which materially reduces the value in Europe.

Second. The nonconsumption of coal or the reduction of the same to such a point that the cost of the whole process is altogether disproportioned to that of the present production of mattes containing 50 and 70 per cent copper.

The initiators of this important enterprise confine themselves for the present to recommending the erection of an establishment and plant of reduction at Ceno de Pasco, because of that mining center being the most important one at the present time; but, as the process is already sufficiently studied out, perfected, and applied with great advantage in the United States and Europe, it may very well be introduced in the other mining centers where required.

INDEBTEDNESS OF NICARAGUA.

I transmit the following translation of an abstract from the report of Hon. Feliz P. Zelaya, Secretary of the Treasury and Public Credit, to the Nicaraguan Congress at its ordinary session for the year 1900:

In the increase of our debts of the last year, a large part is due to the loans of February 12 and July 15 in the emission of treasury bills and fractional money of nickel, with which resources the administration was enabled to meet the expenses of the campaign on the Atlantic (Reyes' revolution) and to provide for the amortization of the external and domestic debts. These extraordinary resources, rendered necessary by the circumstances, reached the following sums, with their corresponding equivalents, respecting the general augmentation of the debt:

Voluntary loans of February 12	$342,603	=$194,283
Voluntary loans of July 15	382,478	= 218,012
Completement of bills issued	311,662	= 177,647
Emission of nickel money	50,000	= 28,500
Total	1,086,743	= 628,442

The amount of the general indebtedness, as has been demonstrated, and according to a previous report, may be stated under two heads, as follows:

Foreign debt	$3,962,346.75	=$2,258,538
Domestic debt, consolidated and floating	8,064,934.61	= 4,597,013
Total	12,027,281.36	= 6,855,551

There is no other foreign debt than that of the English of 1886, the bonds for which bear 4 per cent interest, with the obligation for the amortization of 1 per cent more, one-half each for the principal and consolidated interests of the remaining coupons of 1895. The operations of the last year were justified by the obligation to punctually meet the coupons Nos. XXV and XXVI, payable July 1, 1899, and January 1 of this year.

As is shown by Statement IX, to which the report of the tribunal of accounts refers, to pay this obligation there was remitted, in anticipation, as is the usual custom of the Government, £14,852 7s. 1d. ($72,181.75), which sum was applied as follows:

	£	s.	d.	
Two coupons at 4 per cent interest	11,400	0	0	=$55,478.10
1 per cent more for the sinking fund	2,850	0	0	= 13,869.53
Expenses of the service of the debt	522	3	11	= 2,541.26
Excess produced by amortization over sinking fund	19	7	6	= 94.28
Total	14,791	11	5	= 71,983.17
Residue	60	15	8	= 295.80
Balance to December 31, 1898	315	17	9	= 1,537.26
Disposable for the following amortizations	376	13	5	= 1,833.06

It would appear that in computing the value of the peso currency, in which the statement of the foreign debt is made, the rate of 175 per cent premium was used.

WILLIAM B. SORSBY,

SAN JUAN DEL NORTE, *December 6, 1900.* *Consul.*

RAILWAY CONTRACT IN NICARAGUA.

Referring to my report of October 9, 1900,* I have to state that the Nicaraguan Government has contracted with Mr. Julio Weist, an American engineer resident at Managua, who superintended the construction of the 27 miles of branch line of the national railway system from Masaya to Diriamba, to construct a railroad from the end of the Oriental Division of the national railway system, at Managua, to the village of La Paz, Department of Leon; there connecting with the Occidental Division of the same system. The following summary of the contract appears in a Managua paper:

This connecting line will be the same gauge (narrow) as of the two divisions mentioned; will be about 37 miles in length, and must be completed within two years, excepting fortuitous circumstances and superior force.

The Government agrees to supply and to deliver opportunely the materials for construction purposes, such as rails, sleepers, nails, and screws pertaining thereto; picks, switches, levers, etc.; two locomotives, twenty platform cars, two rail cars, a half mile of rails, and two portable "Decanville" cars; also the land necessary for switches, side tracks, tanks, etc., and, in case of delay in the delivery, the contractor has the right to an extension of time equal to the delay suffered. The contractor is to make requisition, as needed.

The portable railway and its cars is to be delivered within one month after the inauguration of the work, one locomotive and ten platform cars and also one rail car three months after, and the rest of the material ten months after written notice has been given that they are required; all of which is to be returned in the same condition in which they were received, except for the deterioration and damage from natural uses.

The railway line is to pass to the north of Lake of Asososca, going around the hill La Cuesta, near the town of San Andres, in the direction of the village of Mateare, and thence in a long line to the Lake of Managua until El Obraje is reached, and thence in the direction of Nagarote; thence to the village of La Paz, connecting with the Occidental Division.

The contractor will construct a station in Mateare identical with that of Catarina; one in Nagarote and another in La Paz identical with that of Niquinohome; he will also construct tanks of 10,000 gallons each in each of above-named villages and wells to supply the water; and will provide switches or side tracks at each end of the principal line.

The contractor is given the right to introduce, free of customs duties and without the payment of imposts, contribution, taxes, commissions, etc., of any character whatever, fiscal, municipal, charitable, or improvement of public properties, ordinary or extraordinary, established or to be established, all material intended for the execution of the work; and the free use of the telegraph and telephones and free passes on the national railways and steamers, together with free transportation for the laborers, are given; and the employees are exempt from military, police, and public service.

In case of revolutionary movements within the country or international conflicts, the Government reserves the right to call to its service the citizens of the

*See ADVANCE SHEETS No. 877 (November 3, 1900).

country; but in that case the contractor will be reimbursed for the salaries of the engineers employed, for the purpose of keeping the organization together and to be able to resume the work, once the trouble has passed; and also, as the sole compensation for the loss of laborers, the sum of 2,000 pesos will be paid to cover the expense of securing other laborers.

The contractor has the right to exclude and banish from his camps and works all persons who cause disorders, especially those who, in one way or another, secretly violate the laws in selling strong liquors, for which purpose the superior employees of the company are invested with the necessary police power; and in each camp the contractor shall have a number of subalterns on his own account with functions as police agents.

The contractor shall also have the right to use all natural materials found along the right of way necessary for the construction of the railroad.

The paper, however, failed to state what the compensation of the contractor will be.

Actual work is reported to have been commenced on the 12th instant, and there is every incentive and prospect that it will be pushed forward to completion within the period stated—two years.

The completion of this connection—the Central Division of the national railway system—will serve to increase the transportation facilities of the country in the most substantial and desirable manner, and will afford uninterrupted transit from Corinto, on the Pacific, to Granada, on Lake Nicaragua. From the latter point, the lake and the River San Juan are navigable to San Juan del Norte, on the Atlantic.

Moreover, the connecting division will pass through and open up some of the best lands of the country, and, as stated in a previous report, will obviate the necessity of the present cumbersome transfer system from Managua across Lake Managua to Momotombo. Upon the completion of the Central Division, the main line of the national railway system will be, approximately, 137 miles in length, including side tracks, which, with the branch line from Masaya to Diriamba of some 30 miles, will give a total mileage of 167 miles of 3-feet-6-inch-gauge railroad.

WILLIAM B. SORSBY,

SAN JUAN DEL NORTE, *November 26, 1900.* *Consul.*

GUATEMALAN NORTHERN RAILWAY.

Consul-General McNally reports from Guatemala, November 30, 1900, that the representatives of the Central American Improvement Company* have returned and completed negotiations for the lease of the Northern Railroad. This is to be turned over to the company by the Government December 1, and work will begin immediately.

*See ADVANCE SHEETS No. 843 (September 26, 1900); CONSULAR REPORTS No. 242 (November, 1900).

The National Assembly, Mr. McNally is informed, will be convened for the purpose of ratifying the lease. The Government desires that the railway and bridges recently washed away be repaired immediately, to permit transportation from Puerto Barrios to El Rancho. It is expected, he adds, that traffic on this part of the road will be resumed within sixty days.

Under date of December 7, Mr. McNally adds that the National Assembly has ratified the contract for building the Northern Railway from Puerto Barrios to Guatemala City. Three hundred men have been working for a week, and work will be pushed energetically.

GUATEMALAN RAILWAY CONTRACT.

Consul McNally sends from Guatemala, December 14, 1900, translation of the contract between the Government of Guatemala and the Central American Improvement Company, incorporated under the laws of New Jersey.

The principal articles of the contract are summarized as follows:

Rafael Spinola, Minister of Public Works for the Republic of Guatemala, for the one side, and Richard Barthel, representative of the Central American Improvement Company, incorporated under the laws of the State of New Jersey, United States of America, for the other, have executed the following contract:

ARTICLE 1. To complete the construction of the Guatemala Northern Railway from El Rancho to the city of Guatemala, within a period of thirty-six months, using material and methods of construction the same as now in use—that is, steel rails, in the shape of a T, weighing 56 pounds per yard, timber ties, iron bridges, water pipes, etc.

ART. 2. To add to the fixtures of the railway as soon as they shall be found necessary three cars for first-class passengers, three cars for second-class passengers, sixteen plain platform cars, and sixteen closed cars for the carrying of baggage and freight ("standard box cars").

ART. 3. In payment for the construction of 60 miles of railway from El Rancho to the city of Guatemala, the Guatemalan Government will issue bonds for $4,000,000 gold, payable within ten years from the date in which this contract is executed. The company is to begin repairs December 1, 1900, and the work on the new line between El Rancho and the capital within ninety days thereafter. The bonds will be turned over to the company when the railway shall have been completed to the city of Guatemala.

ART. 4. As a guaranty for the fulfillment of this contract, the Government shall concede to the company that part of the line already built, known as the Guatemalan Northern Railroad, which extends from Puerto Barrios to El Rancho, together with all the rolling stock, buildings, telegraph lines, Puerto Barrios pier and wharf, and other properties, excepting the lands of "Los Andes," which are owned by the Department of Public Works in this capital. In this last part the company will be allowed to work for a term of ten years, subject to the inspection of an employee of the Government.

ART. 5. The Government will permit the introduction of all material and implements for the railway, as well as of all effects for the workmen, free of duties or taxes.

ART. 6. The Government will provide the company with the lands needed for the line, free from all cost to the said company, from El Rancho to Guatemala; also for railway stations, warehouses, etc.

ART. 7. The Government shall furnish workmen from time to time until they number six thousand, each of whom shall receive $1.50 (65.7 cents) per day.

ART. 8. During the period of construction and for ten years after the work is finished, the company will have the right to exploit the woods of 500 caballerias (57,500 acres) of land designated as "Los Andes," in the place selected by the said company, and to make plantations which, after the expiration of ten years, will remain the property of the company on its paying to the Government the sum of $500 pesos silver ($219) per caballeria (about 115 acres) of land. The titles of these lands shall be delivered by the Government with the sole condition that a right of way shall be reserved to all neighboring lands, public or private. The Government will not dispose of any of the lands of Los Andes until the company has chosen the 500 caballerias (57,500 acres), which must be done within a year.

ART. 9. The following prices will be paid for products of the land of Los Andes exploited in conformity with the previous article:

Corn	per 100 pounds...	$0. 75=$0. 328
Beans	do.....	.75= .328
Bananas	per bunch...	.10= .043
Lumber, from the port of embarkation to its destination, per 1,000 feet		6. 50= 2. 85

ART. 10. All the products obtained under the direction of this company shall be free from export duties and taxes, with the exception of coffee, sugar (refined and crude), and lumber in the rough.

ART. 11. At the expiration of ten years, the Government will pay to the company the amount named in the obligation, as well as the excess of the cost of the rolling material and equipment existing on that date; and the Government will enter immediately into possession of everything pertaining to the railway.

ART. 12. If the Government shall desire to sell the railway at the expiration of the period of ten years, the company shall have preference in the purchase.

ART. 13. If the Government should fail in the payment of the said obligations or to comply with any point of importance stipulated in this contract, the company will have the right to retain the part already constructed and called Guatemala Northern Railway, and also that to be constructed from El Rancho to the capital, until the day payment is made, the Government having to pay 6 per cent annual interest during the delay.

* * * * * * *

ART. 15. The company is to repair the road from Puerto Barrios to El Rancho on its own account. It can use existing material free of cost.

ART. 16. Whatever dispute may arise respecting the fulfillment of this contract shall be arranged by arbitration, the arbitrators to be selected amongst the ministers accredited to the Guatemalan Government; one to be named by the Government and the other by the company, the third by both parties in case of discord. (In no other case can there be diplomatic intervention.)

ARTS. 17 and 18. On the regular trains of the company, mail bags and postal clerks shall be carried free. Government troops and material of war—also Government commissioners—will pay 25 per cent of the regular rates when they are on commission

ARTS. 19 and 20. During war, the trains will be at the disposal of the Government. Goods for the public service will pay half the regular rate.

ART. 21. The President of the Republic, his ministers, the diplomatic corps, the maires of the Departments through which the railway passes, will not be charged for their passage and their baggage.

ART. 22. As a guaranty for the performance of this contract, the company will deposit in the national treasury $200,000 in Government bonds, $50,000 of these bonds at the time of the signing of this contract and the balance at the time of taking charge of the part already constructed.

ART. 23. If in three years after the execution of this contract the railway is not completed, unless on account of uncontrollable forces, the Government will enter into possession of the railway, and the $200,000 named in the foregoing article will be forfeited to the Government.

ART. 24. This contract shall be the first lien on that part of the Northern Railroad already constructed.

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ART. 27. Goods in transit can be transported by the Northern Railway without the payment of import duties, except all war material.

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ART. 33. If within twenty-one months 20 miles of the roadbed has not been finished, this contract shall be considered annulled.

ART. 34. The company must give the Government specifications of the work within ninety days from the date of this contract.

RUBBER IN GUATEMALA.

Frequent inquiries are received at this consulate concerning rubber, its cultivation, and the manner of its treatment. Many attempts have been made to manufacture a substitute for this valuable substance, but up to the present time nothing has been found to even partially serve in its stead.

To one contemplating the cultivation of rubber, the primary consideration is to locate suitable land. Some lands, while having all the elements required for fruitful production, lack the fertility necessary for quick growth. The time required for development depends entirely upon the soil and the advantages of location. Some lands will develop the growth of the tree so rapidly that in seven years it will produce milk, while others need from nine to ten years. Land located near the sea and at its level, having the full benefit of the sea breezes, will produce in much shorter time than land of a higher elevation and farther inland. In the cultivation of rubber one must also cultivate patience, for at least seven years are required before any return is made on the investment; however, cocoa, sugar cane, tobacco, and other marketable products can be raised at the same time, which will pay expenses for rubber cultivation.

The rubber tree is what is commonly called croton germ, and

when any part of it is planted in soil favorable to rubber, it grows more rapidly than when seed is planted. In this case, it must be transplanted to the place set apart for its final development.

In Guatemala and all Central America, the *Castilloa elastica* is cultivated, and its product is of fine quality. The *Castilloa elastica* is a tall and well-shaped tree, having a smooth bark of a whitish-green color; it attains a height of 45 to 60 feet. The branches—few in number—grow very long and almost horizontal, and out of them spring two rows of long oval leaves.

The product or milk of this tree exists in the fibers located between the bark and the tree. These fibers are the vital part of the tree, which fact necessitates the greatest care in making incisions to extract the milk. Should one accidentally cut into these fibers, the life of the tree would be endangered. It is estimated by good authority that the milk of the rubber tree contains about 60 per cent of water and other substances and about 40 per cent of rubber; and, allowing for further losses in its treatment, one can count on 33⅓ per cent of the whole being rubber of good quality.

Only of recent years has rubber cultivation been seriously thought of. Before this time milk was taken from trees growing wild, and one spoke of "hunting" rubber.

The rubber tree must not be exposed to the extreme rays of the sun, and should therefore be shaded by other trees; but not so much as to prevent the free passage of air, for ventilation is essential to the growing plant.

Some planters insist that rubber and coffee will grow on the same land, and therefore plant the rubber tree to serve as a shade for coffee and cocoa. While the coffee and cocoa would undoubtedly be benefited by the shade of the rubber tree, the product of the latter would be of little value, as the sun would sap the vitality of the tree. Rubber trees at high elevations, though beautiful in growth, give but little milk. Not all trees produce milk even at a favorable altitude. The tree called the female yields the product; the male tree gives nothing. It is necessary, however, to plant the male species, for experience has demonstrated that a plantation of female trees alone would be fruitless and unproductive. Successful rubber planters from whom I get my information say that among every thirty-five female trees there should be one or two male trees. The male tree, when the incision is made, gives out a puff of wind, but produces no liquid.

The soil where the rubber is planted should be loose and deep, with no clay or stones. The land should be clean for at least 3 feet around the tree. The ground must be well worked before the rubber seed is planted; the soil must be damp, and the seed must be

placed about 2 feet apart. The seed should be picked in March, as it falls from the tree with the gum on it. If washed, it may destroy the seed. In about a year, the little plant will be 1½ feet high. It must be stripped with the greatest care and the roots covered with dirt; it should then be transplanted. For the first year, the plant should be kept free from weeds or it will become choked. The transplanting method has always proven more efficacious than planting the seed; this also enables one to select the healthier plants and guarantee production. The rubber trees should be about 6 yards apart and, if the shade trees will permit, should be placed in rows. Weeding about the tree must be done at least four times a year during its early growth; this care lessens as the tree matures. Weeding is done with a machete. The weeds and some branches of neighboring trees are cut into small particles and strewn around the tree to act as a fertilizer.

Opinions differ about the time required for the mature development of the rubber tree, but, as before stated, much depends on the location and soil, as well as on the care given the growing plant. Some planters say that the rubber tree when fully developed will yield from 3 to 4 pounds of milk yearly, while others think this estimate too liberal. The life of a rubber tree is impossible to estimate; trees growing wild in the forests here seem to be hundreds of years old and still give milk as frequently as those of later cultivation, though not in such quantities. The tree can be bled twice a year with safety; more frequent tapping will injure it.

After the tree has developed, very little care is required other than to keep down the weeds, etc. The wild trees above mentioned each yield about 2 pounds of rubber yearly, without the least care other than what nature has given, showing that attention is alone necessary to increase the production and improve the quality. The tree should be bled at certain prescribed seasons; the best is when the leaves have fallen off and the tree is nearly stripped. The yield at this time is greater than at any other. The incision in the tree is made in the form of an S. One incision at the bottom of the tree is not enough, because the fibers are not good conductors, and the milk thickens by exposure and prevents free flowing. In making the incision, care must be taken not to cut the fiber, as above mentioned; the incision must extend through the bark only.

As to the treatment of the milk when extracted, opinions differ. The natives make a canal in the tree and let the milk run into a hole in the ground made particularly for that purpose, which answers as a receptacle. In the process of hardening or solidifying, dirt is taken in, and, of course, the rubber is not pure and is of less value. Some permit the milk to flow into a barrel, and the juice of a vine,

"quiebra-cajite," is used to solidify. Alum, which has an almost immediate effect on the rubber, is much used. An indirect fire is also used to cause the evaporation of the water in the milk. Care should be taken to prevent the receptacle or vessel used from staining the rubber. Another process is to pour the milk into water; the milk hardens immediately and when taken out is in appearance much like a sponge. It should then be passed through a press and all the water squeezed out; an American wringer can be used for the purpose. When this is done, the rubber is of a whitish color and is the pure product.

Every inquiry received desires data as to the probable cost of rubber production. This is difficult to give, as much depends on the person engaged in the work. However, these points must be considered: The cost of the land, its location, and the quality of the soil; the facility for securing workmen; the means for getting the rubber to the coast or railway, etc. It is estimated that 100,000 trees can be planted in 1 caballeria (about 115 acres), which land can be purchased for about $100 an acre. The labor is cheap; the native workman getting about 6 reales, or 12 cents in United States currency, a day. Small, inexpensive huts must be erected on the plantation for the workmen. Plantains are the food used, and these can be grown in sufficient quantities without any expense whatever. After the trees are planted, very little cost is incurred, unless the planter is raising other marketable products. I know of no enterprise or business requiring as little money as the cultivation of rubber. After the seventh year, each tree can be counted upon to give a product worth at least $1 gold per year, and sometimes $2. When the tree begins to yield, it must be protected from rubber thieves, who not only steal the rubber, but slash and cut the tree so badly that it dies. Sugar cane, coffee, etc., can be grown at the same time, which will not only pay the expenses of the finca, but will yield good returns. Thus the cost of the cultivation of rubber is minimized. Part of the plantation can be reserved for the raising of cattle, which is very remunerative in Guatemala. The pasture land is of the best, and if water is near by the ranch can be established without further outlay.

The rubber lands in Guatemala are equal to any in the world, and with proper care and intelligent cultivation the product will command a price equal to any. There are two seasons here, commonly called winter and summer. The summer season extends from October 15 until about May 1, and is the dry peroid. The winter, or rainy, season lasts from May to October. The climate, soil, and atmosphere of Guatemala are entirely favorable to the cultivation, not only of rubber, cocoa, tobacco, coffee, and sugar, but of

all vegetables and articles of domestic use. It is, in my judgment, the ideal land for the farmer, who, with the application of modern farm implements, could win a recompense for his labor much beyond that to be obtained in our own country. Two crops a year can be raised, and there is absolutely no limit to the articles of farm production which could be cultivated here.

JAMES C. MCNALLY,
Consul-General.

GUATEMALA, *December 7, 1900.*

RUBBER FROM THE HULE PLANT IN MEXICO.

A process for extracting rubber from the hule plant was discovered about a year ago by a Mexican doctor residing in Sierra Mojado. This plant, which contains about 40 per cent of rubber, grows in the mountainous districts of Mexico, as well as in certain localities of Texas, Wyoming, and Nebraska. It is a species of sage brush, with small leaves, and grows to a height of about 3 feet.

A patent on the process has been taken out in the United States and Mexico and a manufacturing plant has been located at San Luis Potosi. All the machinery for use in extracting the rubber has been invented and patented in both countries by the Monterey Foundry and Manufacturing Company, of Monterey.

The principal steps in the process of manufacture are as follows: There are special machines which feed the plant automatically into the cutters; after it comes out of these machines, it is carried by a bucket elevator and dumped into steam-jacketed mixing tanks, containing certain chemicals; the product then runs by gravity into hydraulic filter presses, after which it is subjected to a hydrostatic pressure of 75 pounds to the square inch; it is then conveyed into settling tanks, where the gum, being heavier, settles to the bottom, while the chemicals and residue are drawn off.

The cost of production is slight. The principal difficulty to be overcome is the high freight rate, a box car being quickly filled on account of the lightness and bulkiness of the plant.

P. MERRILL GRIFFITH,
Consul.

MATAMOROS, *November 30, 1900.*

NEW STEAMERS FOR THE WEST INDIA FRUIT TRADE.

Seven new steamers have just been ordered for the fruit trade between the West India Islands and the United States. The contract for one of them—the *Taunton*—with the option of two others, was signed to-day between the United Fruit Company and Messrs. Burmeister & Hains, extensive shipbuilders of Copenhagen. Three of the seven will be built in England, three in Norway, and one in Denmark, with a possibility of two more at Copenhagen. The United Fruit Company has already over twenty steamers in the banana trade from the West Indies to American ports. These vessels are registered as Norwegian, but it is understood that the bulk of the capital invested is American. This company is also adding to its fleet two steel steamers for use in carrying fruit on the Great Lakes.

The *Taunton*, which may be taken as a typical steamer of the banana fleet, will be a spar-deck vessel 227 feet long, 32 feet beam, with a depth of 23 feet. She will have a registry of 2,000 tons net, although her usual load will be about 1,000 tons. With this load she will draw 14 feet of water, and her engines will give her a speed of 13 knots an hour. Besides her cargo, she will have accommodations for thirty passengers. Burmeister & Hains have contracted to deliver the vessel complete for 400,000 kroner ($107,200).

INO. C. FREEMAN,

COPENHAGEN, *December 20, 1900.* *Consul.*

REMEDY AGAINST MOSQUITOES.

A simple remedy against mosquitoes has been employed in several places in South America and is equally well adapted to the temperate zone. It consists in planting the castor-oil plant (*Ricinus communis*), or "palma christi," around the house and premises.

In cold and temperate climates the castor-oil plant grows to a height of 4 or 5 feet; in these countries, it becomes a tall tree and is perennial. It seems that the smell of the plant is disagreeable to mosquitoes and other insects, and it is an acknowledged fact that where these plants grow few mosquitoes will be found.

My personal experience bears this out. My residence is surrounded by plantain and banana trees, and I have been much troubled in the past by the great number of mosquitoes which

gathered between the leaves. Following the example of old settlers in the country, I planted the castor seeds, which grew up in profusion, and there are now no mosquitoes to be found among the plantain and banana trees, although I keep the ground well irrigated. By keeping branches and the seeds of the plant in rooms, the mosquitoes are driven away from the latter.

There are several varieties of the castor-oil plant. In this country there are two—one with brown nuts and the other white in color, with a kernel tasting like the fresh almond.

E. H. PLUMACHER,

MARACAIBO, *November 30, 1900.* *Consul.*

CANADIAN LUMBER EXPORTS.

The lumber exports from Montreal, the principal port of the Province of Quebec, have been carefully totaled from the customs manifests and show a decrease from last year of about 50,000,000 feet. The marked features in the export lumber trade for the past season have been the steady advance in values and the firmness with which stocks have been held, principally owing to the destructive fire at Ottawa in April. The earlier shipments, however, made in fulfillment of existing contracts that were taken at but a slight advance over last year's prices, met with a sharp rise in ocean freight rates, which materially reduced shippers' margins. Owing to the Ottawa fire, only 40 per cent of the shipments from Montreal came under summer insurance rates, while 60 per cent were under extreme autumn rates. The opening spring rates of freight ranged from 45s. to 50s. ($10.93 to $12.15), according to port of destination. Summer and autumn rates ranged from 60s. to 75s. ($14.58 to $18.22), the latter having been paid for special ports. It is said that the lack of ships caused the increase in freight rates.

The following figures show the export lumber trade for the season of 1900, as per custom-house returns:

	Feet.
Quantity exported	226,996,857
To South America	463,765
Total	227,460,622
Quantity shipped last year	280,063,787
Decrease	52,603,165

Some two dozen replies to letters sent out by the Canadian Lumberman were published in the last edition of that paper. These replies go to show that logging operatives are unable to obtain a sufficient number of employees. Wages and food have advanced, and the chances are that the output of logs will be materially reduced.

The Lumberman adds that the increase in the wages of woodmen in the United States has amounted to nearly 85 per cent during the past four years. It is believed that there has been an almost equal advance in Canada. This increase can not be disregarded by manufacturers, who must of necessity secure for their product a price sufficient to cover the higher cost of production.

The consumption of lumber for manufacturing purposes is likely to grow. In addition to a steadily growing home demand, the export of furniture and wood implements is increasing. It is not improbable that the United States and Great Britain will take from Canada next year fully as much, if not more, lumber than in the season now closing.

FELIX S. S. JOHNSON,
Commercial Agent.

STANBRIDGE, *December 11, 1900.*

NICKEL INDUSTRIES OF CANADA.

Nickel was first found to exist in paying quantities in Canada in the year 1887, the principal deposits being in what is known as the Sudbury district. Since then, the industry has developed until it is claimed that Canada furnishes over 40 per cent of the nickel of the world.

The district in which the ore is found is near Sudbury, in Ontario, and is about 70 miles long by 40 miles wide.

The deposits are irregular in character and range from small pockets to acres in extent, rising in places to ridges and hills of solid ore. It is estimated that there is enough nickel now located to supply the world for the next hundred years at the present rate of consumption. There are now less than a dozen mines equipped with plants, with an output of about 700 tons of ore per day. The deepest mine goes down about 1,000 feet, and others from 50 to 400 feet.

The ore usually runs about 3 per cent in nickel to the ton, or a little less, and about the same in copper, with a large proportion of sulphur and iron in almost equal parts.

No ore is at present reduced to the pure nickel and copper in Canada; most of it being shipped in the shape of matte to the Orford Copper Company, in New Jersey, for refinement.

It takes as a rule 7 tons of ore to make 1 ton of matte. Reducing ore to matte is a very simple process. Dry split wood is placed on level ground to the height of about 1 foot, and ore is placed on top of this to the height of about 6 or 8 feet. Fire is applied and the wood soon ignites the sulphur in the ore; it will burn from six to

twelve weeks, reducing the sulphur, roughly speaking, from 30 per cent to 7 per cent.

It is then coarsely crushed and run through a smelting process in a furnace, the ore settling to the bottom and the slag running off, as in a common iron furnace. The ore is self-fluxing, but the addition of a small amount of lime or limestone will produce better results.

The matte thus produced is called 40 per cent matte, but an analysis from one furnace shows 38.5 per cent.

The principal companies operating and preparing to operate in this district on a large scale are the Canadian Copper Company, of Cleveland, Ohio, the Mond Nickel Company, of London, England, and the Lake Superior Power Company, of this city; others are in the field, but on a smaller scale.

The two companies first named are putting in refining plants to further reduce the matte to perhaps 80 or 90 per cent before shipping to their refining plants in New Jersey and Swansea, Wales, respectively. The Lake Superior Power Company is building smelting and refining plants in this city, and proposes by a new electrical process to separate and save all the by-products of the ore.

A large quantity of the sulphur thus saved will be utilized in the manufacture of sulphide pulp in the new mill just about completed here, and the balance will probably be put on the market for sale in the shape of liquefied sulphuric acid. This company claims that the nickel pig manufactured by its process will contain nickel and iron in a perfect state of harmony—also a large per cent of carbon—and be capable of producing the very highest quality of nickel steel.

The managers have therefore concluded to utilize the product themselves in the manufacture of nickel steel, and have commenced the construction of a steel mill in this city for the manufacture of rails and plate; the capacity will probably be about 600 tons of nickel-steel rails and 400 tons of plate per day.

Iron for mixing with nickel pig will be smelted here, the ore coming from the Helen mines, near Michipicoton.* These mines have been shipping ore during the last season, and have developed a capacity of 1,000 tons per day.

The company is also building a railroad from the eastern end of Georgian Bay to its nickel mines, a distance of about 50 miles, for which it is understood it will get a money bonus from the Dominion Government and a land bonus from the provincial government. This will enable it to ship ore from the mines to the smelters and mills here by vessel.

* See CONSULAR REPORTS No. 230 (November, 1899), p. 486; ADVANCE SHEETS No. 540 (September 28, 1899).

During the last session of the legislature, the Ontario government took steps to impose an export tax on nickel ore and matte (amounting to $7 on ore and a proportionate amount on the matte); but it is understood that this tax is to be held in abeyance until it can be shown that nickel can be successfully refined on a practical scale in Canada. Many good judges in the mining district think that this action will materially retard the development of the mines in the Sudbury district.

GEO. W. SHOTTS,
SAULT STE. MARIE, *December 20, 1900.* *Commercial Agent.*

THE NOVA SCOTIA COAL STRIKE.

The threatened coal-mine strike in Nova Scotia was inaugurated in Pictou county to-night, December 31, 1900, notwithstanding the reported truce of ten days. The miners demand a 12 per cent increase from January 1, 1901, with a further raise of 10 per cent to take effect April 1, 1901. Twelve hundred men and boys are out at Thorburn, Westville, and Stellarton. Advices from Westville to-night say there is very little coal ahead, and that the strike will tie up the railways connected with the mines and works of the Nova Scotia Steel Company at Ferrona.

There is keen interest felt in the absence of definite news from Cape Breton. Should the three thousand employees of the Dominion Coal Company and the other Cape Breton companies be induced to strike also, a serious coal famine in Nova Scotia will ensue. The mines have been working to their fullest capacity for months past and are still behind in their contracts. Coal for general consumption has not been so scarce in the Maritime Provinces and Newfoundland for many years.

GUSTAVE BEUTELSPACHER,
MONCTON, *January 1, 1901.* *Commercial Agent.*

DEVICE FOR PREVENTING SHIPWRECKS.

During the past two years, there have been many wrecks of vessels navigating the coasts of British Columbia and Alaska. I have heard complaints from mariners engaged in the northern trade that the coasts north of this city are not properly lighted, and that the waters to the northward have not been as fully sounded as safety to vessels requires.

I append hereto an editorial article which appeared in last evening's edition of the Province, published in this city. If the invention therein described will accomplish the results claimed, it is undoubtedly needed along these coasts.

L. EDWIN DUDLEY,
Consul.

VANCOUVER, *December 28, 1900.*

Shipping statistics show that the recent storms along the western coast of British Columbia have surpassed in general destructiveness any previous visitations. From Cape Beale north along the Vancouver Island seaboard has long been dreaded ground for navigators, a portion of it being known by the significant name of "the graveyard of the Pacific." It will interest those whose calling takes them into these waters to learn that an invention is now being investigated by the marine authorities and navigators at Southend-on-Sea which, if it may not go a long way toward making light-houses obsolete and unnecessary, is expected to be of much value in the prevention of shipwreck from any one of 90 per cent of the usual causes. This is an automatic system of signaling which will warn ships of their approach to dangerous rocks and coasts in all weathers, when even a flashing light might not be seen and the booming of a foghorn be unheard. A metallic conductor is fixed on an elevation ashore or a light-ship or reef or light-house. From this, ætheric waves are transmitted over a zone which has a radius of 7 miles. All vessels within that area which are fitted with receivers are warned of their proximity to danger, the distance and the point of the compass being registered. At the same time, a bell rings and the receiving instrument records the name of the place that is being approached. The automatic part of the invention consists of steel bearings with a number of teeth which pass over a Morse transmitter. No operators are needed. The instrument or machine works absolutely automatically. In its elementary principles, the system resembles Marconi's method of wireless telegraphy, but in detail the system is essentially different. The committee of investigation at Southend-on-Sea has enthusiastically indorsed the invention after submitting it to a variety of tests in both fair and foul weather, and a syndicate is now being formed to engage in its manufacture on a large scale, the inventor stipulating that the price shall be maintained a moderate one, he himself preferring to be remembered as a philanthropist rather than as a millionaire inventor.

NEW RAILWAY IN BRITISH COLUMBIA.

The ratepayers of Victoria voted on November 29, 1900, to give a bonus of $15,000 per annum for twenty years to a syndicate which proposes to organize a railway and ferry to connect Victoria with the Fraser River Valley and the Great Northern Railway of the United States.

The company intends to construct a railway from the present terminus of the Victoria and Sidney Railway in this city through the streets to the terminus of the Esquimalt and Nanaimo Railway; to lease and use the Victoria and Sidney Railway for running cars to Sidney (18 miles away, on the east coast of Vancouver Island); also

to maintain a car-ferry service between Sidney, across the Gulf of Georgia, to Steveston, the great cannery town on the Fraser River; thence to build a railway to Cloverdale, British Columbia (26 miles), where connection will be made with the Great Northern Railway.

In addition to the bonus of $300,000, payable in twenty annual installments of $15,000 each, the syndicate has the privilege of using free of charge such streets of Victoria as are necessary to construct the 1¼ miles of track between the present railway depots; also, the use for twenty-five years at the nominal rental of $100 per annum of the city market building, now used by the fire department.

The distance between Sidney and Steveston, to be covered by a car ferryboat, is 45 miles, which it is expected will be traveled in less than three hours; the proviso being that the ferry steamship shall be capable of making 14 knots an hour and of carrying eight loaded freight cars, of the capacity of 30,000 pounds each, and four hundred passengers on each trip.

The Great Northern Railway has a five-year contract to carry all freight to and from Victoria by this route, which will enable cars to come direct to this city without breaking bulk, thus avoiding wharf charges for freight and transshipment of passengers.

The proposed line renders available the present Victoria and Sidney Railway, long one of the dead assets of the city, which pays each year $9,000 guaranteed interest on bonds of said road. By many, this is regarded as the commencement of an era of improvement which will culminate in the extension of the Esquimalt and Nanaimo Railway to Hardy's Bay, the extreme north of Vancouver Island, and thus place Victoria in the direct line of travel from the United States to the north.

No opposition is anticipated to the granting of a charter for the proposed new terminal railroad and ferry route, which, it is provided, shall be completed within two years and work on which, it is promised, will commence in the near future. But no active steps have yet been taken.

I inclose maps showing the proposed route of the new railway and ferry.*

ABRAHAM E. SMITH,
Consul.

VICTORIA, *December 21, 1900.*

* Filed for reference in the Bureau of Foreign Commerce.

PROPOSED RAILROADS IN BRITISH COLUMBIA.

It is said here that arrangements have been made for the immediate construction of a railway from this city (Vancouver) to New Westminster, British Columbia, there to cross the Fraser River and parallel its left (or southern) bank for nearly 100 miles; thence, following the valleys of other streams, to run to the boundary country in the vicinity of Greenwood or Midway.

The proposed road is to be known as the Victoria-Vancouver and Eastern Railway and Navigation Company. It is understood that the road will extend westward from Brownsville, opposite New Westminster, to Point Roberts, whence passengers and freight will be ferried to Victoria.

The Canadian Pacific Railway has completed its line to Midway, and it is asserted that it will continue the construction at an early day, carrying the new road through to connect with the main line near Hope or Yale. If both these projects mature, Vancouver will have two lines competing for the trade of the southeastern portion of this Province.

The "boundary country" is very rich in minerals. It is said that, since 1858, $20,000,000 worth of placer gold has been taken from a single stream in that section.

Both these projected roads will not only open a country extremely rich in the precious metals, but one that embraces a very large extent of fertile land adapted to stock raising and agriculture.

The completion of the contemplated extension of the Canadian Pacific Railway will shorten its line from Montreal to Vancouver about 250 miles. The reason given for the location of the main line so far north is that in the act granting the charter it was provided that no portion of the line should approach the northern boundary of the United States nearer than 50 miles.

The construction of either of the lines proposed will be of the greatest possible advantage to Vancouver. The completion of both will result in competition which will promote the interests of merchants here and consumers in the boundary district in equal measure.

The northern portion of the State of Washington is interested in the proposed new railways, for both come near the boundary; and it is probable that ultimately lines running north and south within the State of Washington will connect with the Canadian lines, greatly to the advantage of both countries.

The Boundary division of the Canadian Pacific Railway is a continuation of the Crow's Nest Pass division, which has been in operation less than two years. A bridge is now in process of con-

struction over the Columbia River at Robson, British Columbia, to connect the Crow's Nest Pass and other lines with the Boundary road. A branch of the Great Northern Railway from Great Falls, Mont., now joins the Crow's Nest Pass Railway at Lethbridge, and another line from Bonner's Ferry, Wash., connects with the same line at Nelson, British Columbia.

A charter has been granted for a road up the Kettle River Valley from Marcus, Wash., which is expected to reach the boundary at or near Nelson, Wash., 4 miles from the Canadian Pacific Railway at Columbia, British Columbia. It is also rumored that another spur of the Great Northern Railway is contemplated from the point where it crosses the Sans Poli River, through the rich mining camp of Republic, Wash., to Nelson, Wash.

The building of the new road would give this city a direct southern connection with the Great Northern Railway, which now has its northern terminus at Brownsville, on the south side of the Fraser River, opposite New Westminster, British Columbia, thereby giving Vancouver two competing lines to Seattle and other points south. It is rumored here that the proposed line east from here will become a part of the Great Northern system.

While the proposed railway development in this Province will greatly benefit Vancouver and all the surrounding country in British Columbia, it will at the same time promote the interests of the people of the State of Washington by opening new markets and furnishing facilities for reaching them.

The manufacturers of the United States ought also to find a market for a large quantity of tools, machinery, and railway supplies in the work proposed. Railway contractors and laborers are also likely to find employment in the construction of these lines.

L. EDWIN DUDLEY,

VANCOUVER, *December 28, 1900.* *Consul.*

THE TRANS-SIBERIAN RAILWAY.

The Trans-Siberian Railway authorities have had a great deal of trouble with Lake Baikal. The lake is about 65 miles wide, very deep, and exceedingly stormy the greater part of the year. The banks are very marshy for a long distance from the water line to the hard surface. At present they have large ice-breaking steamers of the American system, with barges attached for transportation of passengers and merchandise. The cars are also conveyed on these barges. This preliminary arrangement was made as they were in a hurry to make connections, while at the same time they were surveying a line around the lake. It sometimes happens that passengers and cars can not be landed on the other side, in consequence

of the storms on the lake, and are kept on board of the steamers from twenty-five to forty hours at a time.

At present, they have finished the surveying of two Kroogo-Baikal lines. The word "kroogo" means "circuit." One of these lines has been selected and will no doubt be built in the near future. This will run by way of Olchy and Toogoontchili, thus avoiding a number of tunnels, so that in the whole distance from Irkutsk to Kooltooga it will only be necessary to build two tunnels, each 1,120 feet long. By this means, several million rubles will be saved which were expected to be expended in the construction of the line around the lake. Engineers believe that if the selected line is again carefully looked over even the two tunnels can be avoided, and in this case there will be no underground excavations to be made on this section.

THOMAS SMITH,
Consul.

MOSCOW, *December 22, 1900.*

MANUFACTURING INDUSTRIES IN EAST SIBERIA.

The population of the Amur Province is steadily increasing, and the demand for articles of consumption and wear is rising apace. In the past, the importation of all merchandise was attended by great difficulties. Goods came overland from European Russia and by sea from Russia and foreign countries. The opening of direct sea communication between Vladivostock and Odessa facilitated importation, but prices, particularly of manufactured articles, remained high. Naturally, enterprising people conceived the idea of establishing manufacturing plants; but the difficulty of obtaining raw material, as well as machinery, laborers, and master workmen, proved a serious obstacle.

Another thing that had to be taken into consideration was the limited market, and this might have been an insurmountable drawback had not the Imperial Government appeared on the field as an immense consumer and customer. There is no doubt that the Government, in purchasing large quantities of stores here, intended to stimulate the activity of the manufacturing interests in this territory. But immunities, such as exemption from excise or encouragement in the way of protective duties or premiums on the part of the Government (the control and supervision of manufacturing is in charge of the Ministry of the Finances), business enterprises in the Amur Province have never received. It is true that several factories are allowed to carry on their business free of the license tax; but this tax amounts to very little, and the exemption must be considered as only a moral stimulus. This unsatisfactory condition of affairs continued until 1890.

The construction of the Ussury Railroad brought about a general increase of business. The population began to grow rapidly and consumption rose in proportion. The importation of Russian and foreign goods by sea became larger, new methods of procuring raw material were developed, and new factories were built and old ones enlarged.

The following is a descriptive table of the factories in the Maritime Province:

Industries.	Number of factories.	Horsepower.		Capital invested.		Men employed.	Annual production.	
		Boilers.	Steam engines.					
				Rubles.			*Rubles.*	
Sawmills	4	88	83	77,000	$39,655	36	33,000	$16,995
Joiners' shops	2	.....	.....	6,000	3,090	9	9,000	4,635
Match factory	1	20	12	180,000	92,700	182	100,000	51,500
Flour mills	4	30	28	44,000	22,660	20	163,000	83,945
Distillery	1	100	35	250,000	128,750	24	312,500	160,938
Beer breweries	2	.....	.....	80,000	41,200	14	24,904	12,826
Breweries of Chinese beer	7	.....	.....	35,000	18,025	21	146,750	75,576
Oil mills	1	8	6	30,500	15,708	19	33,000	16,995
Rope yard	1	.....	.....	40,000	20,600	70	5,000	2,575
Tallow boilery	1	2	6	.....	.....	36	200,000	103,000
Soap boilery	1	.....	.....	7,000	3,605	2	10,000	5,150
Tannery	1	.....	.....	60,000	30,900	18	100,000	51,500
Brick works	14	12	12	189,000	97,335	1,015	268,200	138,123
Beton works	1	.....	.....	.....	.....	.....	5,000	2,575
Limekilns	6	.....	.....	.....	.....	104	67,500	34,763
Pottery works	1	.....	.....	.....	.....	.....	2,000	1,030
Metal works	2	8	6	.....	.....	58	45,000	23,175
Total	60	262	208	998,500	514,228	*1,628	1,524,854	785,301

*There were also 60 boys, 5 women, and 14 girls employed in the match factory.

The above table does not refer to factories where the work is not continuous, nor to those belonging to the Government. Neither water nor wind power is employed in any of the factories.

For fuel in the works, firewood is mostly used; but in Vladivostock and vicinity, where forests are few, coal will be substituted in the future. At present, the chief consumers of coal are the seagoing steamers, which are increasing in number from year to year. The coal used by these steamers comes mainly from Saghalin and Japan. The discovery on the mainland, in the South Ussury district, of coal beds that can be depended upon will extend the use of this fuel.

The workingmen are nearly all Chinamen; a few Japanese, however, are employed as master workmen. Russians are also employed where some degree of knowledge is required. Foreign master workmen are very scarce. Women and children are not employed at all, except in the match factory. The wages paid to

persons who possess technical knowledge are very high in comparison with those of European Russia. In general, wages are high for common laborers, the majority of whom are also Chinamen. The labor of these people is less productive than that of European workingmen, which tends to increase the cost of production. There is no labor question in the European or American sense. The demand for labor is always above the supply, notwithstanding the crowds of Chinamen that arrive here by every steamer.

The following table shows the number of factories in the Amurskaya Province:

Industries.	Number of factories.	Horsepower.		Capital invested.		Employees.		Annual production.	
		Steam boilers.	Steam engines.			Men.	Boys.		
				Rubles.				*Rubles.*	
Tar making	2	.....	.....	900	$464	2	.....	2,200	$1,133
Flour mills	20	225	225	562,100	89,482	133	.....	1,696,025	873,453
Brandy distilleries	1	46	16	40,000	20,600	20	.....	208,432	107,342
Beer breweries	3	4	4	60,000	30,900	23	.....	55,687	28,679
Yeast making	1	.....	.....	1,000	515	2	.....	3,500	1,803
Rope yards	1	.....	.....	1,000	515	12	.....	24,875	12,811
Tanneries	8	.....	.....	13,500	6,953	59	1	120,100	61,852
Soap boileries	2	.....	.....	3,000	1,545	7	.....	34,000	17,510
Brick works	18	.....	.....	20,000	10,300	254	.....	94,000	48,410
Limekilns	2	.....	.....	.....	.....	47	.....	34,000	17,510
Metal works	2	40	8	112,000	57,680	49	11	105,000	54,075
Total	69	315	253	813,500	18,954	610	12	2,377,819	1,224,578

There are more than 120,000 Russians in this province, besides natives, Chinese, Japanese, and Koreans.

RICHARD T. GREENER,
Commercial Agent.

VLADIVOSTOCK, *November 1, 1900.*

INSTITUTE FOR EASTERN LANGUAGES IN VLADIVOSTOCK.

Extensive improvements have been made to the grounds and the interior of the institute building. The half-finished structure, which was entered a year ago, is now nearly completed. At present there are accommodations for 500 to 800 students in lecture rooms, library, seminaries, and music rooms, for the choir is as much a part of the school curriculum as it is of the church services. There is little accommodation for resident students, as with us; only a few students are allowed quarters in the building, the spare apartments being reserved for the director, his family, and his immediate staff, the

major part of whom consists of pupils whose talents he has observed and judiciously guided in post-graduate study at home and abroad.

The annual appropriation for the school is 90,000 rubles ($46,350). Professor Lugebil, born in Alaska, teaches English.

I may add here that Mr. C. J. Czechowicz, of Pennsylvania, has been appointed instructor of English in the town school evening classes.

Not more than forty-eight students are now enrolled in the institute proper. Twenty more, however, are expected—some from European Russia, others from Japan, China, and Korea.

A magazine, says the director, will soon be issued with Russian translations of English and French works on the Orient, its people, religions, and literature. The library embraces over 16,000 volumes and many rare idols, etc.

The plan of studies consists of lectures during the week from 9 a. m. to 2 p. m., as follows:

Course I:	Lectures.
English language	6
Chinese language	11
Theology	2
Oriental geography	3
Political and administrative organizations (civil government), Russia and other countries	2
Political economy	2
Total	26
Practical exercises daily, 4.30 to 6 p. m.:	**Hours.**
English	6
Chinese	6
Course II:	
Morning lectures—	
English language	4
Chinese language	9
Japanese language	10
Korean language	9
Mongolian language	6
Manchurian language	6
International law	2
Political and administrative organization of China	2
History of oriental countries	1
Total	49
Evening exercises—	
English language	3
Chinese language	6
Japanese language	6
Korean language	6
Mongolian language	3
Manchurian language	3
Total	27

All the studies are obligatory, with the exception of the Japanese, Korean, Mongolian, and Manchurian languages. In addition to Chinese and English, each student must select one other language.

RICHARD T. GREENER,
VLADIVOSTOCK, *November 5, 1900.* *Commercial Agent.*

FISHING INDUSTRY OF EASTERN SIBERIA.

The fishing industry holds a conspicuous place in the economy of the Amur country. The seas washing its enormous stretch of coast and the rivers emptying into the seas are teeming with fish, and fishing constitutes one of the oldest industries of the natives. It often happens to be the only means of obtaining food. The Russian settlers are also compelled to make use of this industry, particularly in regions where, on account of a rigorous climate or poor soil, agriculture is impossible.

The abundance of fish permits great development of the industry; even now, however, it is making progress and brings an increasing income to the Imperial Government.

According to an approximate estimate, 3,700,000 poods (about 66,600 tons, of 2,000 pounds) are caught near the coasts of Sakhalin Island, and about 800,000 poods (14,400 tons) along the coast of the mainland from the Korean boundary to the Island Langra. These figures represent the quantity of fish for export, going mostly to Japan. Fish cured in the Japanese manner represent a value of 2,000,000 rubles ($1,030,000).

No estimates are obtainable of the quantity of fish gathered in the Okhotsk Sea, off the coasts of Kamchatka, or in the Bering Sea.

The most abundant fish is a species of salmon called "kaita" (*Oncorhynchus keta*). They enter the Amur River, from the Okhotsk Sea, in large numbers, and may be found as far as 2,000 versts (1,332 miles) up the river. They enter the river twice during the season, making their first appearance near the middle of July. The average weight is light, from 2 to 4 pounds. The passage of these fish continues for nearly a whole month. Two weeks later, the entry of the autumnal fish begins, also continuing three to four weeks. The average weight is now 8 pounds, and some specimens reach 15 pounds and over. The later ones appear to enter the river for the purpose of spawning. After spawning, the majority of the fish perish. Another species of salmon (*Oncorhynchus gorbuscha*) is of importance in the households of the natives. It is dried for food for dogs. This fish makes its appearance after the middle of June,

and the ordinary weight reaches 3 pounds. Other fish of a commercial value are two species of sturgeon. There are also three kinds of carp, but these are as yet obtained in small quantities.

In the lower parts of the river, fish are caught in traps built of stakes. An energetic native, by this means, secures during the season about 20,000 fish. Higher up the river the fishing is carried on by means of nets. The Japanese, with their sea nets, can catch six or seven times as many as the natives with their traps. The Japanese have made their appearance in the lower parts of the river only lately. At first they limited their business to buying fish from the natives, but afterwards found it more profitable to catch them. Their fishing industry has been developing rapidly; already in 1897 they were masters in all the fishing sections that nominally belonged to Russian owners, and through their enterprise the native and Russian industry was threatened. Consequently, the governor-general published an ordinance on June 3–15, 1899, by virtue of which fishing by foreigners in these sections was forbidden, and the Russians were even prohibited from employing foreign laborers.

The entire catch of fish in the Nikolaefsk section of the Amur River (from the village Marijinsk down the river to its estuary and in the estuary itself) was estimated in 1898 to have been 630,000 poods (11,340 tons), of which quantity 401,000 poods (7,218 tons) were sold, realizing about 600,000 rubles ($309,000). The revenue of the Government was 13,332 rubles ($6,866).

The fishing industry on the seacoast of the Japan Sea, from the Korean boundary up to the Gulf of America, is partly in the hands of the local settlers, but mostly in those of Koreans and Chinese, who dispose of their fish in Vladivostock, Possiet, Novokiefsk, and Slavianka. The surplus only is exported to Japan. The total yearly catch is estimated at 40,000 poods (720 tons). Of this quantity, the fishermen sell about 29,000 poods (522 tons), valued at nearly 45,000 rubles ($23,175). Last year, the Government revenue collected in this section was 2,136 rubles ($1,100). Thus the commerce in fish in this section is of little consequence; but the industry is of importance in satisfying the needs of the local inhabitants, as well as of the town of Vladivostock. The herring, the anchovy, the tomcod, and the flounder are the principal species caught here, but salmon are scarce. The latter becomes plentiful in the more northern waters. The fishing section along the coast from the Gulf of America as far as the Gulf of De Castry is thinly settled; the coast is not easily accessible, and, in consequence, the industry has been taken up by outsiders. These are mostly Japanese capitalists, who bring laborers with them in the spring, land them with all necessary supplies, and come again in their schooners in the

fall to remove the produce to Japan. The most abundant fish are the salmon (kaita and gorbuscha) and herring. The latter is used for manure. The catch averages about 130,000 poods (2,340 tons), valued at 105,000 rubles ($54,075). Last year, the Government collected a revenue of 5,134 rubles ($2,644).

The fishing industry on the Island Sakhalin has now reached quite an important degree of development. Three-fourths of it is controlled by Japanese. Of fish manure (prepared from herrings) the Japanese exported last year 600,000 poods (10,800 tons), requiring about 3,600,000 poods (64,800 tons) of herrings. About 6 poods (216.6 pounds) of fresh herring make 1 pood (36.112 pounds) of manure. Sakhalin yielded, in 1898, 525,000 poods (9,450 tons) of salt fish.

The fishing industry in the Okhotsk and Bering seas is still in its infancy. They catch there a very valuable species of salmon—the king salmon (*Salmo orientalis*), the red salmon (*Salmo lycaodon*), the kaita, gorbuscha, keashuch, and herring and codfish besides. At present, only the Russian Seal Skin Company is carrying on fishing on a commercial basis in these waters. The company started business in 1896. In 1898, it paid a tax of 1,941 rubles ($990.61) to the Government for fish exported. Last year, many more applications were received from private persons and associations for license to carry on fishing and other industries in the eastern waters.

SEAWEED INDUSTRY.

The gathering of seaweed on the coasts of this country appears to be an industry next in importance to fishing. The seaweed is obtained from the southern coasts of the Maritime Province and from the southwestern coast of Sakhalin Island. Chinese are almost exclusively employed in this business. The only outfit required is a flat-bottomed boat, a hook, and a scythe. The weight of the prepared product of last year's catch reached 520,000 poods (9,360 tons), valued at 570,000 rubles ($293,550). Nine-tenths of it was obtained on the mainland. The royalty paid to the Government was 30,637 rubles ($15,778).

SEAL-SKIN INDUSTRY.

Seal skins are obtained on three islands of Siberia—on Bering and Copper islands (the Commodore group), to the east of Kamchatka, and on Robben Island, a few miles south, off Cape Patience, on the eastern coast of Sakhalin Island. On the beaches of these islands the fur seals have their rookeries, where they stay during the summer, spending the winter near the coasts of Japan. The exclusive right of slaughtering fur seals on the Commodore Islands and on the Pribilof Islands (St. Paul and St. George) was granted by

the Russian Government to the Russian American Company in 1799. In the beginning of the present century, the demand for fur-seal skins was small, and their price was low. Then they used to kill the so-called gray seals (pups four months old, of both sexes). In 1817, they killed on the Pribilof Islands alone 60,000 seals, but in 1837 only 7,000 and 4,000 on the Commodore Islands. In the thirties, the modern method of dressing and dyeing the seal skins was introduced in London, and this became the center of the fur-seal trade. In 1867, the Russian American colonies (Alaska) were ceded to the United States, together with the Aleutian and Pribilof islands, and the Russian American Company closed its business and wound up its affairs. In 1871, the Russian Government granted the Alaska Commercial Company the privilege of sealing on the Commodore and Robben islands during a period of twenty years. The year before, the same company obtained a similar privilege from the American Government of taking seals on the Pribilof Islands. The business then became a monopoly in the hands of this company; the managers brought system into the business, exporting only choice and well-cured seal skins to London, enormously increasing the demand and price.* From 1871 to 1891 the Alaska Commercial Company exported from the Pribilof Islands to London 1,883,897 seal skins, and from the Russian islands 730,539 skins more. The catch of skins on the Russian islands increased from 30,000 to 50,000 a year. After the expiration of the contract with the American company, the Russian Government granted the exclusive privilege for ten years to a Russian company, organized by four Russian capitalists under the firm name of the Russian Seal Skin Company. According to the contract made with the Government, the Russian Seal Skin Company obligates itself to pay to the Government the following prices for skins:

	Rubles (gold).†
Fur-seal skin	10.38=$5.35
Sea-otter skin:	
First quality	115.33=59.34
Second quality	57.66=29.69
Blue-fox skin:	
First quality	11.53= 5.94
Second quality	5.77= 2.97
White-fox skin	2.31= 1.19

*Just before the close of its business the Russian company sold its raw, salted-down seal skins in London at only 7s. ($1.70) apiece. In 1880, the price obtained by the Alaska Commercial Company averaged not less than 80s. ($19.46) and rose in some years to over 100s. ($24.33) per raw, undressed skin.

†By an imperial ukase the tax on seal skins was reduced in 1898 in the following manner: If the catch does not exceed 10,000 seals, 9 rubles silver per skin; if the catch is between 10,000 and 15,000 seals, 12 rubles; and if above 15,000 seals, 15.57 rubles silver. In 1891 the gold ruble was valued at 77.2 cents; in 1900, at 51.5 cents. The last valuation has been taken in giving the equivalents in United States money.

For the following work, the Government pays the natives 1.50 rubles (77 cents) per seal skin: Killing, skinning, carrying to the warehouses, salting, bundling up, and delivering on board the company's steamer.

The number of fur seals taken on the islands is decreasing from year to year. From 30,689 taken in the beginning of the lease, it fell to 8,719 in 1898. The revenue of the Government also correspondingly diminished, from 523,472 rubles to 158,078 rubles. The following table shows the number of skins exported by the Russian Seal Skin Company from the islands and the dues paid the Government, in silver currency:

Year.	Fur seals.	Sea otters.	Blue foxes.	Taxes paid.
	Number.	*Number.*	*Number.*	*Rubles.**
1891	30,689	2	.....	523,472
1892	33,837	196	2,417	583,315
1893	31,716	151	20	550,476
1894	25,879	2	2,090	488,410
1895	17,723	228	15	300,693
1896	14,418	131	1,316	253,641
1897	13,177	149	989	229,989
1898	8,719	87	2,325	158,078

*Silver. On account of the fluctuations in the values of the ruble, no attempt has been made to give the equivalents in United States currency.

The decrease in fur seals on the islands is principally ascribed to the indiscriminate slaughter of both males and females by sealing schooners in the open sea. It may soon lead to the extermination of this species. The schooners, moreover, often tried to rob the rookeries on the islands; and since 1884 the Russian Government keeps a military watch on Robben Island during the summer and autumn months, and since 1891 a naval transport has been cruising around the Commodore Islands during the open season for the protection of the rookeries. By a law enacted in 1893, the taking of seals in the open sea was forbidden, and the question of preventing the extermination of these animals became a subject of international negotiation.

WHALE FISHERY.

The seas contiguous to the eastern coast of Siberia abound in whales of different kinds. Long ago, their number attracted American whalers into these seas. A whole fleet of schooners (about two hundred) used to roam about in the Okhotsk and Bering seas during the summer; according to the testimony of the shipowners, they obtained during a period of fourteen years (from 1847 to 1861) oil and whalebone to the value of $130,000,000. The catching

of whales on such a large scale partly reduced their numbers and partly dispersed them. Captain Ressin, who was ordered in 1885 to the coasts of Kamchatka and the Tchukotsky territory, reported that from thirty to thirty-five foreign whalers, including five or six steamers, yearly resorted to the Russian waters; from 1881 to 1884 their yearly catch averaged 192 whales, yielding about 5,000 tons of whalebone and 2,300 tons of oil, with a total value of 1,788,868 rubles (about $900,000 gold).

Among Russians who first engaged in whale fishing in the waters here was Mr. O. W. Lindholm, a Finlander by birth; he arrived in the sixties and carried on whale fishing till the eighties. In 1889 the business was undertaken by Navy Post Captain Dedemoff; in January, 1891, the steamer he was in was lost, leaving no trace. At present Count Henry Kaiserling is engaged in this business. He owns two steamers specially fitted out, and has a factory in the Gaidamack Bay (Gulf Vostock) for draining oil, etc. He carries on fishing principally in the Japan Sea. From June 1 to December 1, 1897, he succeeded in catching 50 whales. Fifteen of them were salted down for the Japanese market; the remaining 35 yielded 165 tons of oil and about 3 tons of whalebone, altogether to the value of $50,000 gold. As all the whales were caught outside of Russian waters, the Imperial Government collected no revenue from the industry.

On the southern coast of Sakhalin, in Aniva Bay, a Japanese—Hokoora Matoy—has a whale-fishing station, established since 1898. He manages to catch them with fishing nets, as the Japanese usually do. They try to ensnare the whale and then kill him with harpoons. In 1898, up to November 15, they succeeded in killing 18 whales.

In 1899, a Vladivostock merchant—M. Semionoff—fitted out a steamer for whaling in the Okhotsk Sea. The results of his enterprise are not yet known. It may be expected that whaling, in view of the profits to be gained, will hereafter attract the attention of other enterprising Russians.

Among other mammalia, these waters are inhabited by hair seals, sea lions, and the white grampus. Their oil, flesh, and hides are of considerable use in the households of the natives. The walrus is also to be met with in Bering Sea. No accurate information is to be had as to the number of these animals captured during the past year.

RICHARD T. GREENER,

VLADIVOSTOCK, *November 21, 1900.* *Commercial Agent.*

NOTES.

American Steel Rails in Australasia.—Under date of Melbourne, December 19, 1900, Consul-General John P. Bray transmits the following clipping from the Melbourne Argus of December 14, relative to the success of American firms in tendering for the supply of steel rails and fish plates for government railways in the colony of Victoria:

The commissioner of railways recently called for tenders for the supply of 17,440 tons of steel rails and 1,880 tons of fish plates, which represent about two years' supply for the existing railways in Victoria. Up to the present time no rails have ever been manufactured locally in large quantities, and it was therefore known that the tenders would have to come from the steel foundries of the Old World. When the time closed, six tenders had been received—most of them through the agent-general in London (Sir Andrew Clarke)—from English, German, and American companies. Mr. Mathieson fully anticipated that the department would have to pay a high price at the present time, but when he examined the tenders he received a pleasant surprise, for the figures quoted were generally below his estimates.

Messrs. James M'Ewan & Co., Limited, representing the Illinois Steel Company, Chicago, and the Loran Steel Company, Cleveland, United States, tendered for the rails at £5 17s. 9d. ($28.65) per ton and the fish plates at £7 7s. 6d. ($35.88) per ton, and their tenders were accepted. Two years ago the successful tenderers agreed to supply the steel rails at £4 18s. 6d. ($23.96) per ton and the fish plates at £7 18s. 3d. ($38.50). The railway authorities thought that they would not be able to secure the rails and fish plates for much less than £180,000 ($875,970); but Messrs. M'Ewan & Co.'s tenders work out at about £117,000 ($569,380), so that they were considerably above the mark. An English company recently offered to establish the necessary iron works in Victoria to manufacture steel rails if the railway department would guarantee to give it orders for 10,000 tons of rails a year for ten years. The matter was considered by the late ministry, but nothing came of the project, probably because Victoria does not seem to possess the requisite supply of iron ore.

Steamship Lines at Panama.—Under date of January 7, 1901, Consul-General Gudger reports from Panama:

The contract between the Panama Railroad Company and the Pacific Mail Steamship Company, which has been in existence for the past five years, expired on the 16th day of December, 1900. In consequence of the failure to renew this agreement, the Panama Railroad Company has placed three steamers on the Pacific coast, to ply between San Francisco and Panama. The first vessel to leave this port will be the *St. Paul*, which sails the 8th instant. The Pacific Steam Navigation Company and the South American Company

of Steamships have extended their lines to San Francisco, and the first steamer will leave Panama for that port on the 13th instant. The Pacific Mail Steamship Company has its terminus here at present, but it is thought that this arrangement will not be continued for any length of time. I may add that, except as regards freight to be carried in American bottoms, the Panama Railroad Company and the two southern companies act in harmony.

New Railway in British Columbia.—Consul Dudley reports from Vancouver, January 14, 1901:

I am informed that the Great Northern Railway is to build a branch up Big Sheep Creek Valley, in southeastern British Columbia. This will furnish transportation to a mining region of importance, second, perhaps, in the Trail Creek division, only to the section around Rossland. This railway will furnish transportation to the group of mines and mining properties on the west slope of Sophie Mountain, some three of which are in a condition to ship; indeed, it is alleged that these mines can now furnish as large a tonnage of ore as did the mines of Rossland when the first railway was extended thither. In the valley are several promising claims, which have been partially developed, and the railway should cause them to be further operated and turned into large producers of ore.

The opening of the new district will furnish a market for considerable mining machinery of American make. The farmers of eastern Washington will also be benefited by a new market for their produce. Undoubtedly, many American miners and laborers will also find employment in the new district.

Electric Railways in Canada.—Under date of January 25, 1901, Commercial Agent Beutelspacher reports:

The Dominion statistician has compiled some interesting figures regarding the thirty-four electric railways of Canada. During the year ended December 31, 1899, he says, 630 miles of track were used and the total number of miles run by cars was 29,646,847. Passengers carried numbered 104,033,659, which was equal to carrying every man, woman, and child in the Dominion twenty times. Compared with the previous year, the number of passengers increased nearly 9,500,000 and the number of miles run over 1,000,000. The amount of paid-up capital invested in electric railways is $21,700,000.

Railroads of Roumania.—The Department is in receipt of the following from Consul Hughes, of Coburg, November 26, 1900:

From official Roumanian sources, I learn that there are at present 1,932 miles of railway open to traffic, as against 1,550 miles in 1890 and 1,713 miles in 1895, while 72 miles are under construction and 360 miles under survey. The total expenditure on railways up to the present has been $140,000,000, including about $6,700,000 on the Cernavoda Bridge. Last year, the revenue was $8,992,761.55 and the working expenses about $7,299,750. A combination of lignite and petroleum is now largely used for fuel, a special apparatus having been invented for the proper consumption of the mixture. In 1896, only 2,200 tons of petroleum were consumed in the engines, but last year this rose to 15,200 tons; while the consumption of lignite rose in the same period from 17,200 tons to 67,000 tons. The railway administration recently initiated a weekly through service between Paris and Constantinople and Ostend and Constantinople via Bucharest and Constantza, and a daily service between Bucharest and Berlin via Lemberg.

Foreigners in Spanish Railways.—Deputy Consul-General Hanauer writes from Frankfort, January 12, 1901:

A royal decree lately published in Spain discriminates against foreigners by giving concessions for the construction of railroads and tramways only to Spanish subjects or companies which have their chief offices in that country. The order provides that shares and mortgage bonds must be payable in Spanish coin, as also the interest and dividends upon the same; that two-thirds of the board of directors must be subjects of and reside permanently in Spain. The same rule applies to executive officials in the boards of supervision and management, as well as to engineers and superintendents. Deviations from this rule shall only be allowable when considered necessary by the Government.

Competition of Electric Vehicles in Berlin.—Under date of November 27, 1900, Consul Hughes, of Coburg, writes as follows:

Dr. M. Kallmann's report on the competition of electrically propelled vehicles in Berlin is highly instructive. The battery taking the first honors weighed only 121 pounds per kilowatt hour, while the heaviest weighed 286 pounds per kilowatt hour. The mean weight of the thirteen vehicles taking part in the competition was 165 pounds. Upon the assumption of a yearly total mileage of 9,500 miles, he calculates the annual maintenance cost of a battery at

only 48d., or, say, 1 cent per mile. The smallest consumption of energy per ton mile at the mean speed amounted to 91 watt hours for a passenger car, a far better performance than previous records are able to show. At the highest speed, the consumption increased to 135 watt hours. However, in the majority of cases, the demand did not vary greatly with the speed, which leads to the conclusion that, in order to obtain the greatest commercial economy of energy, the electrically propelled car should be driven at the highest speed consistent with public safety. By the high speed, the consumption of energy per car mile is not considerably increased, while the number of passengers which may be transported in a given time naturally increases with the speed. With regard to the motor best adapted for the weight to be propelled, the capacity should amount to approximately 1 kilowatt per ton of the rolling weight.

The Mosel-Saar Canal of Germany.—Consul Hughes, of Coburg, November 26, 1900, sends the following:

The Germans are persistently improving their canal system. The latest scheme relates to the winding Mosel, which begins in France and ends its course at Coblenz, where it empties into the River Rhine, a total distance of 514 kilometers (319 miles) by water, but in a straight line only 274 kilometers (170 miles). The proposed scheme will embody a length of about 200 miles and a level difference of 340 feet. The Mosel at its source is 735 meters (2,411 feet) above sea level, and at its junction with the Rhine 58 meters (198 feet), the main incline in the river bed being in the upper course. To get over this difference of 340 feet forty-two needle weirs are planned. The cost, apart from the harbors, is estimated at nearly $15,000,000. The scheme would also involve the straightening of about 40 miles of the Saar, which is a tributary of the Mosel; and this would bring the cost to about $18,000,000. The whole question was discussed at a special meeting held in Metz in the latter part of last June. Although the scheme would rival the Rhine-Elbe Canal, representatives of the Westphalian Coke Syndicate have given it their support. Like Westphalia, Lorraine and the Saar district owe their development chiefly to the iron and coal industry, though cement and brick making are also important.

German Canal Project.—Consul Hill, of Amsterdam, under date of January 17, 1901, writes:

The new canal bill introduced in the Prussian Diet, which is an extension of the canal project of 1899 (rejected by the lower House

of the Diet that year), attracts attention here because of its bearings on Netherlands ports. The 1899 project was to connect the Rhine with the Elbe and to canalize the Weser from Bremen to Minden. The new plan, in order to avoid the objection against the former measure—that it would benefit only the western part of Germany—extends the system to all sections of the Kingdom and comprises seven distinct enterprises, at a total cost of $92,584,594.20. The estimated cost of the Rhine-Elbe Canal is $62,066,758.60; the ship canal from Stettin to Berlin, $9,877,000; the water way between the Oder and Vistula, with the channel making the Warthe River navigable from Posen to the junction of the Netze, $5,386,178; improving the Lower Oder and Upper Havel, $9,755,382 and $2,301,460, respectively; canalizing the Spree, $2,221,968.

Locomotive-Fuel Contracts in England.—Consul McFarland, of Nottingham, under date of January 4, 1901, says he is informed that the coal owners of South Yorkshire have signed contracts with the railway companies for the supply of locomotive fuel during the six months commencing January 1 at 13s. 6d. ($3.28) per ton, as compared with 16s. 6d. ($4.01), the price previously ruling. This reduction will relieve the companies of about one-half of the extra charge for coal, which has interfered with dividends for the past half year; but the price still remains higher by 3s. or 4s. (73 or 97 cents) per ton than the average contract price for this class of fuel prior to the recent phenomenal rise. Household coals show some reduction, but not in proportion to these contracts. In the opinion of coal owners, however, prices in general will diminish considerably during the present year.

Ice in France.—Consul Haynes writes from Rouen, January 1, 1901:

The French palate, so sensitive and highly educated, knows nothing of the delicacy of frozen dainties. There is an open field throughout the most of France for everything connected with the preparation of the cool drinks. Ice-cream freezers, milk shakers, soda-water fountains, and refrigerators would find a ready sale here if the people knew of the comfort to be derived from their use. The Frenchman has for generations innumerable liked his hot wine and hot rum and hot punch, but he has never thought of, or at least has never cared to try, the effect of an opposite sensation upon his palate. This city of over 150,000 people has no ice factory,

though a few people keep ice in their cellars. If the French were given an opportunity to try them, they would not be long in entering the market for ice cream, ice shavers, electric fans, and kindred articles, and the American who introduced them would without doubt put a considerable amount of money in his own pocket.

New Process for the Preparation of Leather.—Under date of Rotterdam, January 8, 1901, Vice-Consul Voorwinden transmits the following for the information of United States tanners:

Mr. P. A. Bloys van Treslong Prins, of 88 Laan Copes, The Hague, called at this consulate a few days ago and showed me some samples of leather ready for saddler's use and seemingly of a very good quality. He stated that it had been prepared by a new process, by means of machinery of which he alone knows the construction, and that by using this system a moist hide can be turned into leather ready for saddler's and shoemaker's use in from two to three days, while by following the usual method of preparation it takes about six months. He also stated that, previous to making application for patent on the machinery, he would like to correspond with American tanners in regard to his process for making leather, with a view to introducing it in the United States.

Coal Trade of Hungary.—Consul Hughes sends from Coburg, December 13, 1900, the following quotation from a printed article on the Hungarian coal trade:

Although Hungary could quite cover its consumption of coal by home production, the imports are considerable. The total production during the year is estimated at 5,950,000 tons, an increase of 160,000 tons over the preceding year. A very large percentage of this is lignite, the production of coal in the stricter sense of the word amounting to only 1,300,000 tons. The imports into Hungary amounted to 1,750,000 tons, the exports to 200,000 tons. Both these figures are a little lower than those of 1898.

Coal Discovery in Germany.—Consul Hughes, of Coburg, under date of January 3, 1901, says that a layer of brown coal has recently been found under the bed of the River Havel, in the neighborhood of Potsdam. A drilling machine has been placed on two barges, which are timbered together and riding at anchor in the river. By means of this machine, coal is brought to the surface from a depth of over 80 feet. Borings will be made to determine the depth and extent of this layer and whether it will pay to work it.

Russian Importation and Production of Coal.*—Consul-General Holloway reports from St. Petersburg, January 4, 1901:

The Russian Minister of Finance has announced that foreign coal imported for Government railroads will be admitted free of duty at all Russian ports until July 14, 1901, by which time, it is expected, the domestic supply will equal the requirements. In consequence of strikes in coal mines near Warsaw and Lodz, coal intended for use in those cities is admitted free, and a material reduction has been made in the duty on coal for use at Odessa, Sebastopol, and Nikolaeff. The output of coal in Russia in 1897 was 10,900,000 tons; in 1898, 11,956,000 tons. The figures for 1899 are not completed; but the output for the first six months of that year indicated an increase of 7,000,000 tons over the production for the same period in 1898, and it is expected that the last part of the year will make a still better showing.

Meeting of Iron Manufacturers of Russia.—Consul Smith writes from Moscow, December 21, 1900:

The Ministry of Agriculture has found it necessary to call a meeting of the iron manufacturers of the country to consider the present crisis in the iron industry of Russia, as the majority of puddling furnaces and rolling mills are at a standstill. This serious state of affairs has attracted the attention of the Government, which will take energetic steps to uphold the iron manufacture of the country. Large quantities of iron ore have been exported lately to England.

Customs Dues at Vladivostock.—The Department has received a cablegram from Commercial Agent Greener, of Vladivostock, to the effect that the customs tariff, which it had been proposed to impose at that port, will not take effect for the present. According to an imperial decree, the free ports of Siberia were to be closed in January.† The municipal authorities united with the leading merchants in a petition to the Minister of Finance to keep the port open. The cablegram reads: "Tariff probably postponed; regular customs July."

Chinese Silk and Tea Trade.—Consul Hughes, of Coburg, under date of December 12, 1900, writes as follows:

The consequences of the disturbances in China are being seriously felt in the silk and tea trade. The Chinese production of silk in

*A report covering much the same information has been received from Consul Smith, of Warsaw.

†See ADVANCE SHEETS No. 900 (December 1, 1900); CONSULAR REPORTS No. 244 (January, 1901).

1900 is estimated at 4,500,000 kilograms (9,920,700 pounds). While this is by no means a bad result in itself, the uncertain conditions of business make it appear rather risky to import Chinese goods. This accounts for the great demand at Lyons this year for Syrian silk goods. Unfortunately, the present silk crop in Turkey is not very good, so that a rise of prices is probable. The tea trade is in a similar position. The large houses that import are well provided, but there is a scarcity of freight steamers to load the cargoes. Insurance companies do not like to run risks and refuse to insure Chinese goods, while banks have ceased to advance money on this kind of merchandise. The Ceylon tea plantations will benefit by these conditions.

Wreck on the Yangtze Kiang.—Consul Miller, of Chungking, under date of Shanghai, December 29, 1900, reports that the German passenger and freight steamer *Sui Hsiang* has been wrecked in the rapids of the Yangtze 60 miles above Ichang. The steamer was a total loss; the captain was lost; the passengers and crew were saved. This steamer, adds the consul, was built especially to navigate the Yangtze River through the great gorges, from Ichang to Chungking, as one of a regular line of German steamers to be run from Shanghai to Chungking. She was on her trial trip, and her loss will be a serious blow to steam navigation in the Upper Yangtze.

In a report dated December 17, Mr. Miller noted the departure of the boat on the previous day. The company, he said, already had boats running to Hankau, and the additional service would have given a continuous line of steamers from Shanghai to Chungking, a distance of 1,500 miles.

Development of Samoa.—Consular Agent Harris sends the following from Eibenstock, January 5, 1901:

German plantation experts claim that the Samoan Islands have a great future in coffee, tea, tobacco, cotton, etc. Upolu Island, it seems, is especially suitable for the culture of all these products, possessing, as it does, favorable position, a fruitful soil, and a good climate. A company is at present being formed in Germany for the purpose of exploiting this island—laying out plantations, establishing narrow-gauge railways, etc. Men of practical experience, who acquired their knowledge of plantations in East Africa and Brazil, are at the head of the enterprise. Work is expected to commence next spring.

Foot and Mouth Disease in Uruguay.—Consul Swalm, of Montevideo, December 3, 1900, says it is officially reported that the foot and mouth cattle disease has disappeared in all of the Departments of the Republic and that the herds are in the very finest condition. In several of the Departments the losses from this disease were very heavy, but generally the percentage of deaths fell below 3 per cent. Save only thoroughbred or breeding stock, adds Mr. Swalm, the herds of Uruguay never know the comforts of a shelter, but as snow or frost or sleet is very rare the exposure seldom results seriously. He continues:

The tick is more feared that anything else, and where both the tick and the foot and mouth disease are prevalent the skinning knife is the only remedy applied.

Export of Chilled Meat from Uruguay.—Consul Swalm, of Montevideo, under date of November 29, 1900, writes as follows:

The River Plata Fresh Meat Company, Limited, has contracted with the Royal Mail Steamship Company to install in each of its steamers a chilling apparatus with a capacity of 1,500 beef carcasses. Three thousand carcasses will be shipped to Southampton each month, the average voyage from the River Plata requiring about twenty-two days. The cattle will be almost entirely grass fed and will make excellent beef. The number that can be so exported annually from Uruguay and Argentina will approximate 1,000,000 head. As the class of cattle (including crossbred Hereford and shorthorn stock) slaughtered and shipped abroad will not cost, on an average, above $30 United States gold per head, the River Plata countries will undoubtedly prove a strong competitor with the United States in English and other European markets.

Wheat Crop of Argentina and Uruguay.—Consul Swalm, of Montevideo, informs the Department, December 7, 1900, that the wheat crop in the River Plata provinces of both Argentina and Uruguay is reported as being in a very bad condition. The young plants have been damaged by an exceedingly heavy rainfall, the soil being thoroughly saturated for weeks. An unusually hot spell, following cold weather, has also induced a blight that will leave many fields unprofitable. On the Argentine side, in numerous instances, a yield of not over 8 quintals (13.5 bushels) to the hectare (2.471 acres) is expected, while in Uruguay it is doubtful whether there

will be sufficient wheat raised for home consumption alone. Generally, there is very little doubt but that the River Plata exports of wheat will fall at least 50 per cent below those of last year, and the same is true of linseed.

South American Steamship Service.—Consul Jenkins reports from San Salvador, December 10, 1900:

The Pacific Steam Navigation Company and Sud Americana Vapores have advertised that, in accordance with arrangements made with the Panama Railroad Company, they will make weekly trips to all Central American ports and take freight consigned via the Isthmus to the United States and Europe; further, that a semi-monthly service to San Francisco will be inaugurated by the steamer leaving Valparaiso on the 26th of December.*

Spanish South American Steamship Service.—Writing from Montevideo, under date of December 3, 1900, Consul Swalm says that the Spanish Pacific Line has given notice of the abandonment of the service to the west coast of South America, the traffic proving unremunerative. These steamers are of an excellent class, but conditions seemed to favor the older English and German lines. The last Spanish steamers called no farther south than Montevideo.

New Cruiser for British Columbia Coast.—Commercial Agent Beutelspacher, of Moncton, informs the Department, January 1, 1901, that contracts have been let for the building of a number of steam launches to guard the fisheries at the mouth of the Fraser River and for a steam cruiser to patrol the coast of British Columbia. The contract for the former, which will cost between $7,000 and $8,000, has been awarded to the Albion Iron Works, of Victoria, British Columbia. The launches will be 60 feet long. A. Wallace, of Vancouver, has obtained the contract for building the cruiser, the expenditure upon which will be between $60,000 and $70,000. The vessel will be a three-masted schooner, 130 feet in length, and will have a guaranteed speed of 12 knots an hour.

Brazilian Rubber Shipments.—Consul Kenneday reports from Para, under date of January 3, 1901, that a bill passed by the legislature of the State of Amazonas, taking effect January 8, 1901, prohibits the packing, weighing, casing, and labeling of rubber and

*See ADVANCE SHEETS No. 919 (December 26, 1900).

other products of the State of Amazonas for shipment to other points, either foreign or Brazilian, at any port except Manaos, the capital. This, adds the consul, will seriously injure the industries of Para.

American Cotton Plants for German Togoland.—Consular Agent Harris sends from Eibenstock the following extract from a dispatch to the London Daily Mail, from its Berlin correspondent:

The arrangements for introducing the American cotton plant into German West Africa are practically complete.

In accordance with an arrangement made with planters in Alabama, an American expert, with two American farmers and a mechanic, will leave the coast for Togoland about the middle of December. They will be accompanied by one hundred and fifty carriers and workmen, who will join them in Lorne.

The expedition is under the protection of the Government. The funds expended so far amount to about $20,000, and the Berlin colonial economic committee has promised to give further aid to the enterprise.

Depression in German Cotton Industry.—Consul Hughes reports from Coburg, January 8, 1901:

The German cotton industry is at present in a very unsatisfactory position, and much anxiety is expressed because of the absence of any ground for hope of improvement. Manufacturers experience great difficulty in disposing of their output without making concessions, although stocks are small. The colored-goods trade is in a very unfavorable condition, and the print trade is also depressed, prices showing no prospect of profit on the current costs of production.

Acetylene Gas vs. Petroleum in Germany.—Consul Hughes, of Coburg, under date of December 18, 1900, writes as follows:

Up to the present time, Germany has imported each year from $25,000,000 to $30,000,000 worth of American petroleum. This industry, however, seems to be threatened somewhat by the introduction of acetylene as an illuminant, in a convenient and safe form, for house, store, and other uses. This has resulted from the low price at which calcium carbide is being produced here, and also from the rise in the cost of petroleum in the German markets.

Double-Scale Tariff in Germany.—Deputy Consul-General Hanauer, of Frankfort, under date of December 7, 1900, notes that commercial and industrial interests in Germany are opposed to the retention of the double scale (maximum and minimum rates)

in the tariff which is now being prepared. One of the chief organs of the German textile and clothing trades points to the danger which the export trade would incur if the Government were to adopt this double-scale tariff, which is in the interest of the few large agrarian landholders and inimical to all other producing classes in Germany.

German Prize for Benzine Substitute.—Under date of December 12, 1900, Consul Hughes, of Coburg, sends the following:

For years, a substitute for benzine has been in demand. The objectionable points about benzine are its high inflammability and volatility, the danger of poisoning the atmosphere, etc. This was one of the chief topics of discussion at last year's chemical congress at Hanover, and this fall the subject came up once more at the meeting at Cassel, when a premium of about $250 was offered for an effectual substitute for benzine, or for means of rendering it less dangerous. Here is a good chance for American genius.

Trade in Hungary.—Under date of January 4, 1901, Consul Hughes, of Coburg, sends the following:

Overproduction in Hungary seems to have depressed nearly all branches of industry, in spite of the fact that crops have been good. The export trade was pushed with energy and with a certain amount of success, especially to the Orient; but this competition with the older manufacturing countries involved some sacrifices. The rise in coal and coke prices increased the difficulties. Hungary produces very little coke. Many miners emigrated. I am informed by the agent of a large American agricultural house that, in spite of hard times, American machines sell very well.

England's Trade with Iceland.—Consul Winter, of Annaberg, under date of January 15, 1901, says that according to a recent report of the English consul in Iceland, English shipping interests with that island have increased. A great deal of meal and rice is sent to Iceland, but there is no longer a market there for live sheep. The consul adds that there are no manufacturing industries of any importance on the island, although there is ample water power, which could be utilized for this purpose.

Belgian Demand for Poultry-Plucking Machines.—Consul Le Bert reports from Ghent, January 15, 1901, that he has received a request from M. Dutry-Colson, No. 12 rue des Champs, Ghent, for names and addresses of manufacturers of poultry-plucking machines. This is an old-established firm, adds the consul, and one of the largest general hardware houses in Belgium. Early replies are much desired.

Rebate in Guatemalan Tariff.—Consul-General McNally sends from Guatemala, January 11, 1901, translation of a decree of December 21, 1900, reading as follows:

For the period of six months more, beginning January 1 and lasting to the 30th of June of the present year, the importers of foreign merchandise will continue to enjoy the benefits conceded in Government decree of the 15th of last May, which discounted 30 per cent on the duties and other taxes on merchandise introduced into the Republic through the port or frontier custom-houses.

United States School Methods for Guatemala.—Under date of January 11, 1901, Consul-General McNally, of Guatemala, sends translation of a recent Executive decree providing that two male and two female teachers shall be sent to the United States to study the methods and system adopted in its establishments of learning. The expenses involved are to be defrayed by the State.

Colombian Ports Closed to Commerce.—Consul Ingersoll writes from Cartagena, December 10, 1900:

I am in receipt of a communication informing me that the governor of the Department of Bolivar has issued a decree declaring closed to commerce all the ports of the Gulf of Morrosquillo, particularly Tolu and Coveñas.

Reopening of Ports in Colombia.—Consul Ingersoll writes from Cartagena, December 30, 1900, that the decree mentioned in his report of December 10, 1900,* was rescinded on the 25th ultimo, the ports of the Gulf of Morrosquillo (Tolu, Coveñas, etc.) being thereby reopened to commerce.

* See preceding note.

Cod-Liver Oil in Venezuela.—Consul Plumacher transmits from Maracaibo, November 29, 1900, copy of a contract recently made by the Government with the manufacturers of Scott's emulsion, authorizing the latter to establish a factory at the capital, and granting the free introduction into the country of the necessary machinery, bottles, etc. The contract is to last twenty-five years.

Catalogues in Asuncion.—Vice-Consul Harrison, of Asuncion, under date of December 14, 1900, says that the consulate is receiving daily applications for catalogues and price lists of machines and tools of all kinds; also, of railway materials. Catalogues should be in Spanish.

Demand for Motors in Madagascar.—Consul Gibbs reports from Tamatave, December 3, 1900, that Mr. E. Cayeux, a sawmill owner of that city, invites correspondence in regard to liquid-air motors. Correspondence may be conducted in the English language.

Consular Reports Transmitted to Other Departments.—The following reports from consular officers (originals or copies) have been transmitted since the date of the last report to other Departments for publication or for other action thereon:

Consular officer reporting.	Date.	Subject.	Department to which referred.
L. L. Stang, Saigon	Dec. 6, 1900	Report of rice market	Department of Agriculture.
Do	Jan. 20, 1901	do	Do.
S. M. Taylor, Glasgow	Jan. 8, 1901	Universities at Glasgow and Edinburgh.	Bureau of Education.
H. S. Brunot, St. Etienne	Jan. 5, 1901	Attachment of workingmen's wages.	Department of Labor.
A. M. Beaupré, Bogotá	Oct. 25, 1900	Colonization statistics	Bureau of the American Republics.
O. J. D. Hughes, Coburg	Jan. 10, 1901	Children's growth in school.	Bureau of Education.
Do	Jan. 7, 1901	Crops of Saxe-Coburg in 1900.	Department of Agriculture.
F. D. Hill, Amsterdam	Jan. 1, 1901	Emigration statistics	Bureau of Immigration.
R. Guenther, Frankfort	Jan. 14, 1901	Strikes	Department of Labor.
Do	Jan. 14, 1901	Serum injection in diptheria cases.	Marine-Hospital Service.
Do	Jan. 15, 1901	Foot and mouth disease	Department of Agriculture.
Do	Jan. 17, 1901	German labor market	Department of Labor.
J. H. Worman, Munich	Jan. 17, 1901	Conferring of titles by royal Bavarian schools of technology.	Bureau of Education.
H. King, Bangkok	Dec. 29, 1900	Imports of treasure	Treasury Department.

FOREIGN REPORTS AND PUBLICATIONS.

Exposition in Indo China.—The Revue du Commerce Extérieur, Paris, December 22, 1900, says:

The governor-general of Indo China is preparing for an exposition which will be held in Hanoï in 1902. It will be divided into three sections:

(1) France and French colonies, other than Indo China.

(2) French Indo China (Tonkin, Anam, Cochin China, Cambodia, and Laos).

(3) Countries of the Far East—China, Japan, Siam, Korea, Netherlands India, the Philippines, Singapore, Peninsula of Malacca, Borneo, English Burma, Hongkong, Shanghai, and the European establishments (English, Russian, German, etc.) of Asia.

Exhibitors will be grouped geographically, each nation occupying a special site, and the exhibits will be classed under three principal groups. The first will comprise works of art, archæological collections, scientific exhibits—everything in general pertaining to the arts and sciences. The second group will comprise a series as complete as possible, methodically classified, of the products of the soil, as well as those worked and manufactured; ores and metallurgic products, agricultural and forest productions. In the third group will be exhibited machinery of every kind, agricultural and manufacturing; everything relating to navigation, railways, utilization of water, of steam and electricity, and their application to industry.

The administration will furnish gratuitously space in the palace, illumination, and motive power; it will also take measures necessary to secure to exhibitors without a representative a good location. Articles can be sent with direct bills of lading, and these shipments will benefit by tariffs specially reduced. The metropolitan direction of this exposition has its office in the bureau of the colonial office, galerie d'Orléans, where applications of exhibitors will be received.

Forest Wealth of the Ivory Coast.—The following is summarized from an article published in La Gazette Coloniale, Brussels, November 18, 1900:

The report relative to the railway of the Ivory Coast contains information as to the forest wealth of the colony. It says in part:

"The forest contains woods, in the zone that we have crossed, to the value of $241 per acre. We have not included in this figure india rubber and palm oil, the commerce of which is susceptible of great extension. Numerous markets can be created for the woods, both for cabinet or industrial uses."

In two years, vegetation again covers cleared grounds which are not kept in cultivation by the natives; for instance, a garden near Mernui, abandoned three years ago, already contains trees 49 feet high. On the other hand, if 10,600,000 cubic feet of wood were annually taken from the Ivory Coast (which would represent the lading of 200 vessels), not one one-thousandth part of the forest wealth comprised between Bandama and the English Gold Coast would be removed.

Peanuts in the Senegal.—La Gazette Coloniale, Brussels, January 6, 1901, has the following:

The peanut has been cultivated from time immemorial by the natives of tropical Africa as an article of food. The inhabitants of the Senegal produce it in great quantities, and as the traveler ascends the river he finds the shores better and better cultivated. The production in the Senegal has developed considerably in the last ten years. The harvest of 1899 was estimated at 125,000 tons, with a value in the colony of $3,860,000. The chief markets are established along the railway from Dakar to St. Louis.

The cultivation of the peanut is very easy and constitutes the real wealth of Senegal, where, on account of the great fertility of the soil, only a little intelligent labor is demanded to produce a large yield. Unfortunately, the blacks are generally indolent, with a fatal lack of foresight, and do not like to apply themselves to the work of the field.

The native of Senegal cultivates only millet, upon which he lives, and the peanut, which he sells to the Europeans established in the country, providing himself with the barest necessaries of life from the proceeds of the sale. He works scarcely six months in the year. In the month of June, he roughly digs up the ground which he has chosen for his future harvest, and then rests until the rainy season, which commences in July and continues into the first week of October. The ground is prepared by means of a peculiar crescent-shaped hoe, fitted into a long pole, with which the native rakes over the surface of the earth to a depth of nearly 4 inches; this operation finished, he burns the weeds which he has uprooted. As soon as the first showers appear, women, children—in short, the whole family—abandon their villages for some days and stir up the ground with a hoe a second time; then make little holes, into which they drop two or three seeds, covering them with a little earth, which is pressed down with the foot. The plants must be weeded two or three times to keep them from being choked.

Cotton Crop in Turkestan in 1900.—The Nachrichten für Handel und Industrie, Berlin, November 10, 1900, says that, according to an announcement in the St. Petersburg Gazette, the cotton crop in the district of Ferghana for the year 1900 is estimated at 144,448,000 pounds. A great part of this year's crop has been already sent to the railway for export. The road can not manage the traffic for lack of cars.

Agricultural Colonization in Algeria.—The following appears in La Gazette Coloniale, Brussels, November 18, 1900:

The government of Algeria has just published its programme of colonization for the next season. The Algerian system is based upon gratuitous concessions of land and the creation of villages upon points chosen by the administration. The plan for 1900–1901 comprises the creation of twenty villages and the enlargement of nine. The area to be given up to colonization is about 111,195 acres, plus 1,200 to 1,500 acres of reserve for the pasture grounds. The number of lots being one thousand, the average of each is 111 acres; but the area varies from 62 to 247 acres, according to the quality of the lands and the distance from the seacoast,

Every village comprises from thirty to seventy households. To obtain a concession, the applicant must be French; he must pledge himself to a residence of five years (which term may be reduced after three years, if there has been an expenditure of $9.65 per acre); he must give proof of having a capital of at least $965, which may be represented by property in France.

Production of Banana Flour.—The Journal de la Chambre de Commerce de Constantinople says:

According to a report of the Colonial Institute, in Marseilles, banana flour is manufactured to a considerable extent in Guiana, Central America, Colombia, Venezuela, East Indies, and in the Malay islands. An attempt to manufacture this flour for export to Europe was made in German West Africa and in the Peninsula of Malacca, but with little success. The manufacture of banana flour is very simple. The unripe banana is cut and dried, then ground and sifted. The fruit yields from 20 to 25 per cent of flour. The chief difficulty encountered in its manufacture consists in preserving its yellow color. For this reason, the apparatus used must be either of aluminum or silver, since iron turns the flour black. The banana flour is very nutritious and is not inferior to the best corn meal. France has no market for this product, but a small quantity is exported to Great Britain, where the price is $130 per ton (2,240 pounds).

Trade of Cook Island.—The following is taken from Nachrichten für Handel und Industrie, Berlin, November 16, 1900:

The import and export trade of Cook Island for the last eight years is estimated as follows:

Year.	Imports.	Exports.
1892	$79,076	$74,916
1893	93,846	89,018
1894	109,180	92,157
1895	113,239	92,872
1896	112,260	75,363
1897	130,719	105,851
1898	88,351	54,549
1899	65,965	54,500

The greater part of the exportation of 1899 was credited to New Zealand. The most important articles of import in 1899 were:

Article.	Value.	Article.	Value.
Tools, machinery	$8,007	Preserved meats	$5,879
Hardware	6,716	Wearing apparel	4,195
Groceries	8,974	Tobacco	1,207
Breadstuffs	4,720	Building wood	6,253
Fancy goods	9,529	Empty sacks	1,431

There were exported, in 1899, 77,024 pineapples, valued at $15,621; 32,643 gallons of lemon juice, valued at $2,973; 684 tons of copra, valued at $26,999; 99,595 pounds of coffee, valued at $8,852; 3,223,543 oranges, valued at $8,609; 18,914 bunches of bananas, valued at $3,489; besides small quantities of dried bananas, cocoanuts, lemons, mangoes, and cotton. The coffee crop early in the season promised to be fair, but the plants were attacked by the Ceylon leaf fungus. The coffee plantations of Rarotonga were completely ruined; fortunately, the islands of Mangaia and Aitutaki were not affected. These two islands, however, only export one-tenth as much as Rarotonga. Plantations of cocoanuts are being substituted for those of coffee, in order to increase as much as possible the export of copra. Rarotonga and Aitutaki are the most favorably situated for commercial intercourse, and the only ones visited by the Union Company steamship lines, while the fruitful islands of Mauke, Aitu, and Mangaia are entirely out of the usual course of steamers.

Industries of Queensland.—The Board of Trade Journal, London, December 6, 1900, says:

Beef and mutton, preserved and frozen, form the principal products of the colony of Queensland, 125,000,000 pounds of beef and 7,600,000 pounds of mutton having been produced in 1899. Dairy products, sugar, and rum are also important industries. The following table gives the particulars of the output of the principal articles in the last two years:

Article.	1898.	1899.
Live stock, slaughtered:		
Cattle.....number...	326,434	386,466
Sheep.....do.....	277,109	479,818
Hogs.....do.....	85,510	101,704
Meat, preserved:		
Beef—		
Preserved.....pounds...	25,182,000	47,223,000
Frozen.....do.....	64,677,000	78,174,000
Mutton—		
Preserved.....do.....	967,000	2,616,000
Frozen.....do.....	2,355,000	4,966,000
Bacon.....do.....	6,973,000	7,148,000
Extract and essence of meat.....do.....	1,593,000	1,925,000
Lard.....do.....	16,000	222,000
Tallow.....tons...	14,000	19,000
By-products of slaughtered live stock.....value...	$1,615,678	$2,564,646
Dairy products:		
Milk.....gallons...	19,237,000	22,934,000
Cream.....pounds...	7,352,000	16,374,000
Butter.....do.....	6,437,000	8,463,000
Cheese.....do.....	1,844,000	1,910,000
Arrowroot.....do.....	876,000	707,000
Biscuits, cakes, etc.....do.....	1,805,000	2,180,000
Jams.....do.....	4,941,000	5,026,000
Soap.....cwts...	68,000	66,000
Candles.....do.....	15,00	15,000
Tobacco, manufactured.....pounds...	509,000	631,000
Leather.....cwts...	32,00	29,000
Boots.....number...	1,383,000	1,754,000

The following table, relating to the sugar industry, shows the area of cane crushed and the amount of sugar and molasses produced. The molasses shows the quantity conserved and utilized. Many mills allow this product to run to waste.

Description.	1898.	1899.
Area of cane crushed.....acres...	82,000	79,000
Sugar produced.....tons...	164,000	123,000
Molasses .....gallons...	3,998,000	3,093,000

Production of alcoholic beverages in Queensland.

Article.	1898.	1899.
	Gallons.	*Gallons.*
Rum	131,166	142,603
Brandy	1,115	615
Wine	134,334	131,045
Beer	5,326,000	5,422,194

Mining Industry of New Zealand.—The Board of Trade Journal, London, November 1, 1900, quotes from the report of the minister for mines for New Zealand for 1900 as follows:

The total production of gold and silver for the year ended December 31, 1899, was 738,896 ounces, valued at $7,562,595. The output of other minerals, including coal and lignite, has been 987,812 tons, representing a value of $5,365,526. Of kauri gum, 11,116 tons was produced; value, $2,958,438. The quantities and values of the chief mineral productions for the past two years are summarized for comparison as follows:

Article.	1899.		1898.	
	Quantity.	Value.	Quantity.	Value.
Gold.....ounces...	389,558	$7,363,856	380,175	$5,259,183
Silver .....do.....	349,338	198,738	293,851	161,115
Coal:				
Exported.....tons...	89,480	404,333	56,382	245,179
Consumed in New Zealand.....do.....	885,754	1,967,655	850,701	1,967,655
Kauri gum.....do.....	11,116	2,958,438	9,905	2,855,502
Total	.....	12,893,020	.....	10,488,634

The expenditure on roads and tracks during the year shows an increase compared with that of last year. The total expenditure by the department during the last eighteen years on roads and tracks, for the development of the mining industry, amounts to $1,601,794 in direct grants and $465,062 in subsidies to local bodies, of which $215,382 and $13,943, respectively, were expended during the year. There are yet no further developments with regard to the iron-ore deposits in the middle island or to the immense quantity of iron sand on the Taranaki coast. With a view to encouraging the introduction of sufficient capital for the erection of smelting works, the government is prepared to consider favorably a proposal based on the following lines: "That a company shall be formed with a capital of

not less than $973,300, of which $486,650 shall be expended in acquiring lands, erecting buildings, and the necessary plant and appliances, and, this having been done, the government shall grant a bonus of $4.86 per ton on the first 24,000 tons of marketable iron or steel produced; that the iron or steel required for the colony shall be taken from the company at a margin above the market rates ruling beyond the colony, allowing freights."

Rubber at Hamburg.—La Gazette Coloniale, Brussels, January 6, 1901, says:

The following statistics of imports show the increasing importance of the trade in rubber on the market of Hamburg:

Year.	Quantity.	Value.
	Tons.	
1896	7,191	$6,045,725
1897	7,576	6,862,694
1898	9,026	9,705,584
1899	11,493	11,256,573

In three years, the importation has increased nearly 87 per cent. German manufactories use the greater part of it. In 1899, only 6,625 tons were reexported. Imports of rubber are made either directly from the countries of production (West and East Africa, Madagascar, Brazil, India) or through English ports.

The same issue says:

A new plant producing rubber has been found in Honduras. It is a vine that grows from 21 to 32 yards in length; its leaves are small, and the size of the stem is from 1 to 2 inches in circumference. The gum is of an excellent quality, and the plant is capable of extensive cultivation.

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PUBLICATIONS OF THE BUREAU OF FOREIGN COMMERCE.*

The publications of the Bureau of Foreign Commerce, Department of State, are:

I.—COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

II.—CONSULAR REPORTS, issued monthly, and containing miscellaneous reports from diplomatic and consular officers.

III.—ADVANCE SHEETS, CONSULAR REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the newspaper press, commercial and manufacturing organizations, etc.

IV.—EXPORTS DECLARED FOR THE UNITED STATES, issued quarterly, and containing the declared values of exports from the various consular districts to the United States for the preceding three months. There is also issued an annual edition of Declared Exports, embracing the returns for the fiscal year.

V.—SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

Following are the special publications issued by the Bureau prior to 1890:

Labor in Europe, 1878, one volume; Labor in Foreign Countries, 1884, three volumes; Commerce of the World and the Share of the United States Therein, 1879; Commerce of the World and the Share of the United States Therein, 1880–81; Declared Exports for the United States, First and Second Quarters, 1883; Declared Exports for the United States, Third and Fourth Quarters, 1883; Cholera in Europe in 1884, 1885; Trade Guilds of Europe, 1885; The Licorice Plant, 1885; Forestry in Europe, 1887; Emigration and Immigration, 1885–86 (a portion of this work was published as CONSULAR REPORTS No. 76, for the month of April, 1887); Rice Pounding in Europe, 1887; Sugar of Milk, 1887; Wool Scouring in Belgium, 1887; Cattle and Dairy Farming in Foreign Countries, 1888 (issued first in one volume, afterwards in two volumes); Technical Education in Europe, 1888; Tariffs of Central America and the British West Indies, 1890.

The editions of all these publications except Tariffs in Central America, etc., are exhausted and the Department is, therefore, unable to supply copies.

In 1890, the Department decided to publish reports on special subjects in separate form, to be entitled SPECIAL CONSULAR REPORTS. There are now the following SPECIAL CONSULAR REPORTS:

Vol. 1 (1890).—Cotton Textiles in Foreign Countries, Files in Spanish America, Carpet Manufacture in Foreign Countries, Malt and Beer in Spanish America, and Fruit Culture in Foreign Countries.

Vol. 2 (1890 and 1891).—Refrigerators and Food Preservation in Foreign Countries, European Emigration, Olive Culture in the Alpes Maritimes, and Beet-Sugar Industry and Flax Cultivation in Foreign Countries.

Vol. 3 (1891).—Streets and Highways in Foreign Countries. (New edition, 1897.)

Vol. 4 (1891).—Port Regulations in Foreign Countries.

Vol. 5 (1891).—Canals and Irrigation in Foreign Countries. (New edition, 1898.)

Vol. 6 (1891 and 1892).—Coal and Coal Consumption in Spanish America, Gas in Foreign Countries, and India Rubber.

Vol. 7 (1892).—The Stave Trade in Foreign Countries and Tariffs of Foreign Countries.

Vol. 8 (1892).—Fire and Building Regulations in Foreign Countries.

* Formerly Bureau of Statistics. Name changed to Bureau of Foreign Commerce by order of the Secretary of State, July 1, 1897.

Vol. 9 (1892 and 1893).—Australian Sheep and Wool and Vagrancy and Public Charities in Foreign Countries.

Vol. 10 (1894).—Lead and Zinc Mining in Foreign Countries and Extension of Markets for American Flour. (New edition, 1897.)

Vol. 11 (1894).—American Lumber in Foreign Markets. (New edition, 1897.)

Vol. 12 (1895).—Highways of Commerce. (New edition, 1899.)

Vol. 13 (1896 and 1897).—Money and Prices in Foreign Countries.

Vol. 14 (1898).—The Drug Trade in Foreign Countries.

Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe, Rabbits and Rabbit Furs in Europe, and Cultivation of Ramie in Foreign Countries. Part II. Sericulture and Silk Reeling and Cultivation of the English Walnut.

Vol. 16 (1899).—Tariffs of Foreign Countries. Part I. Europe. Part II. America. Part III. Asia, Africa, Australasia, and Polynesia. Supplement (1900). Tariffs of Chile and Nicaragua.

Vol. 17 (1899).—Disposal of Sewage and Garbage in Foreign Countries; Foreign Trade in Coal Tar and By-Products.

Vol. 18 (1900).—Merchant Marine of Foreign Countries.

Vol. 19 (1900).—Paper in Foreign Countries; Uses of Wood Pulp.

Vol. 20 (1900).—Part I. Book Cloth in Foreign Countries, Market for Ready-Made Clothing in Latin America, Foreign Imports of American Tobacco, and Cigar and Cigarette Industry in Latin America. Part II. School Gardens in Europe. Part III. The Stave Trade in Foreign Countries.

Vol. 21 (1900).—Part I. Foreign Markets for American Coal. Part II. Vehicle Industry in Europe. Part III. Trusts and Trade Combinations in Europe.

Vol. 22 (1900 and 1901).—Part I. Acetic Acid in Foreign Countries. Part II. Mineral-Water Industry.

Of these SPECIAL CONSULAR REPORTS, Australian Sheep and Wool, Cotton Textiles in Foreign Countries; Disposal of Sewage, etc.; Files in Spanish America, Fire and Building Regulations, Gas in Foreign Countries, India Rubber, Lead and Zinc Mining, Malt and Beer in Spanish America, Port Regulations, Refrigerators and Food Preservation, Soap, etc.; Sericulture, etc.; Vagrancy, etc., are exhausted, and no copies can be supplied by the Department.

There was also published, in 1899, Proclamations and Decrees during the War with Spain, comprising neutrality circulars issued by foreign countries, proclamations by the President, orders of the War and Navy Departments, and war decrees of Spain.

Of the monthly CONSULAR REPORTS, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Bureau will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, the Department will forward franking labels to be used in lieu of postage in the United States, Canada, the Hawaiian Islands, and Mexico.

Persons receiving CONSULAR REPORTS regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to consular reports should be carefully addressed, "Chief, Bureau of Foreign Commerce, Department of State, Washington, U. S. A."

VALUES OF FOREIGN COINS AND CURRENCIES.

The following statements show the valuation of foreign coins, as given by the Director of the United States Mint and published by the Secretary of the Treasury, in compliance with the first section of the act of March 3, 1873, viz: "That the value of foreign coins, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the value of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the 1st day of January by the Secretary of the Treasury."

In compliance with the foregoing provisions of law, annual statements were issued by the Treasury Department, beginning with that issued on January 1, 1874, and ending with that issued on January 1, 1890. Since that date, in compliance with the act of October 1, 1890, these valuation statements have been issued quarterly, beginning with the statement issued on January 1, 1891.

The fact that the market exchange value of foreign coins differs in many instances from that given by the United States Treasury has been repeatedly called to the attention of the Bureau of Foreign Commerce. An explanation of the basis of the quarterly valuations was asked from the United States Director of the Mint, and under date of February 7, 1898, Mr. R. E. Preston made the following statement:

"When a country has the single gold standard, the value of its standard coins is estimated to be that of the number of grains fine of gold in them, 480 grains being reckoned equivalent to $20.67 in United States gold, and a smaller number of grains in proportion. When a country has the double standard, but keeps its full legal-tender silver coins at par with gold, the coins of both gold and silver are calculated on the basis of the gold value.

"The value of the standard coins of countries with the single silver standard is calculated to be that of the average market value of the pure metal they contained during the three months preceding the date of the proclamation of their value in United States gold by the Secretary of the Treasury. The value of the gold coins of silver-standard countries is calculated at that of the pure gold they contain, just as if they had the single gold standard.

"These valuations are used in estimating the values of all foreign merchandise exported to the United States."

The following statements, running from January 1, 1874, to January 1, 1901, have been prepared to assist in computing the values in American money of the trade, prices, values, wages, etc., of and in foreign countries, as given in consular and other reports. The series of years are given so that computations may be made for each year in the proper money values of such year. In hurried computations, the reductions of foreign currencies into American currency, no matter for how many years, are too often made on the bases of latest valuations. All computations of values, trade, wages, prices, etc., of and in the "fluctuating-currency countries" should be made in the values of their currencies in each year up to and including 1896, and in the quarterly valuations thereafter.

To meet typographical requirements, the quotations for the years 1875–1877, 1879–1882, and 1884–1887 are omitted, these years being selected as showing the least fluctuations when compared with years immediately preceding and following.

To save unnecessary repetition, the estimates of valuations are divided into three classes, viz: (A) countries with fixed currencies, (B) countries with fluctuating currencies, and (C) quarterly valuations of fluctuating currencies.

A.—*Countries with fixed currencies.*

The following official (United States Treasury) valuations of foreign coins do not include "rates of exchange."

Countries.	Standard.	Monetary unit.	Value in U.S. gold.	Coins.
Argentine Republic..	Gold and silver..	Peso.....	$0.96,5	Gold—argentine ($4.82,4) and ½ argentine; silver—peso and divisions.
Austria-Hungary*.....	Gold	Crown.....	.20,3	Gold—20 crowns ($4.05,2) and 10 crowns.
Belgium	Gold and silver..	Franc.....	.19,3	Gold—10 and 20 franc pieces; silver—5 francs.
Brazil.....	Gold	Milreis.....	.54,6	Gold—5, 10, and 20 milreis; silver—½, 1, and 2 milreis.
British North America (except Newfoundland).	.....do	Dollar.....	1.00	
British Honduras.....	.....do	.....do	1.00	
Chile.....	.....do	Peso.....	.36,5	Gold—escudo ($1.25), doubloon ($3.65), and condor ($7.30); silver—peso and divisions.
Costa Rica.....	.....do	Colon..	.46,5	Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centisimos.
Cuba	Gold and silver..	Peso.....	.92,6	Gold—doubloon ($5.01,7); silver—peso (60 cents).
Denmark	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Egypt.....	.....do	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland.....	.....do	Mark.....	.19,3	Gold—10 and 20 marks ($1.93 and $3.85,9).
France	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Gold	Mark.....	.23,8	Gold—5, 10, and 20 marks.
Great Britain.....	.....do	Pound sterling...	4.86,6½	Gold—sovereign (pound sterling) and half sovereign.
Greece.....	Gold and silver..	Drachma.....	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti	.....do	Gourde.....	.96,5	Silver—gourde.
India†.....	Gold	Rupee	.32,4	Gold—sovereign ($4.8665); silver—rupee and divisions.
Italy.....	Gold and silver..	Lira	.19,3	Gold—5, 10, 20, 50, and 100 lire; silver—5 lire.
Japan‡.....	Gold	Yen.....	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia	.....do	Dollar.....	1.00	
Netherlands.....	Gold and silver..	Florin	.40,2	Gold—10 florins; silver—½, 1, and 2½ florins.
Newfoundland	Gold	Dollar.....	1.01,4	Gold—$2 ($2.02,7).
Peru§	.....do	Sol	.48,7	Gold—libra ($4.8665); silver—sol and divisions.
Portugal.....	.....do	Milreis.....	1.08	Gold—1, 2, 5, and 10 milreis.
Russia	.....do	Ruble.....	.51,5	Gold—imperial ($7.718) and ½ imperial ($3.80); silver—¼, ½, and 1 ruble.
Spain.....	Gold and silver..	Peseta.....	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden and Norway..	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Switzerland	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Gold	Piaster.....	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay	.....do	Peso.....	1.03,4	Gold—peso; silver—peso and divisions.
Venezuela.....	Gold and silver..	Bolivar.....	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

* The gold standard went into effect January 1, 1900 (see Commercial Relations, 1899, Vol. II, p. 7). Values are still sometimes expressed in the florin, which is worth 2 crowns.

† For an account of the adoption of the gold standard, see CONSULAR REPORTS No. 238, p. 359.

‡ Gold standard adopted October 1, 1897. (See CONSULAR REPORTS No. 201, p. 259.)

§ Gold standard adopted October 13, 1900.

‖ For an account of the adoption of the gold standard, see Review of the World's Commerce, 1896–97, p. 254.

B.—*Countries with fluctuating currencies, 1874–1896.*

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1874.	1878.	1883.	1888.	1889.	1890.
Austria-Hungary*.	Silver	Florin	$0.47,6	$0.45,3	$0.40,1	$0.34,5	$0.33,6	$0.42
Bolivia	do	Dollar until 1880; boliviano thereafter.	.96,5	.96,5	.81,2	.69,9	.68	.85
Central America	do	Peso	.96,5	.91,8	.....	.69,9	.68	.85
China	do	Haikwan tael	1.61	.....	.....	.....	.....	.....
Colombia	do	Peso	.96,5	.96,5	.81,2	.69,9	.68	.85
Ecuador	do	do	.96,5	.91,8	.81,2	.69,9	.68	.85
Egypt†	Gold	Pound (100 piasters).	.....	4.97,4	4.90	4.94,3	.....	.....
India	Silver	Rupee	.45,8	.43,6	.38,6	.32,2	.32,3	.40,4
Japan	Gold	Yen	.99,7	.99,7	.....	.99,7	.99,7	.99,7
	Silver		.....	.....	.87,6	.75,3	.73,4	.91,7
Mexico	do	Dollar	1.04,7½	.99,8	.88,2	.75,9	.73,9	.92,3
Netherlands‡	Gold and Silver.	Florin	.40,5	.38,5	.....	.....	.....	.....
Peru	Silver	Sol	.92,5	.91,8	.81,2	.69,9	.68	.85
Russia	do	Ruble	.77,17	.73,4	.65	.55,9	.54,4	.68
Tripoli	do	Mahbub of 20 piasters.	.87,09	.82,9	.73,3	.63	.61,4	.76,7

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1891.	1892.	1893.	1894.	1895.	1896.
Austria-Hungary*.	Silver	Florin	$0.38,1	$0.34,1	.....	.....	.....	.....
Bolivia	do	Boliviano	.77,1	.69,1	$0.61,3	$0.51,6	$0.45,5	$0.49,1
Central America	do	Peso	.77,1	.69,1	.61,3	.51,6	.45,5	.49,1
Colombia	do	do	.77,1	.69,1	.61,3	.51,6	.45,5	.49,1
Ecuador	do	do	.77,1	.69,1	.61,3	.51,6	.45,5	.49,1
India	do	Rupee	.36,6	.32,8	.29,2	.24,5	.21,6	.23,3
Japan	do	Yen	.83,1	.74,5	.66,1	.55,6	.49,1	.52,9
Mexico	do	Dollar	.83,7	.75	.66,6	.56	.49,5	.53,3
Peru	do	Sol	.77,1	.69,1	.61,3	.51,6	.45,5	.49,1
Russia	do	Ruble	.61,7	.55,3	.49,1	.41,3	.36,4	.39,3
Tripoli	do	Mahbub of 20 piasters.	.69,5	.62,3	.55,3	.46,5	.41,1	.44,3

* The silver standard prevailed in Austria-Hungary up to 1892. The law of August 2 of that year (see CONSULAR REPORTS No. 147, p. 623) established the gold standard.

† The Egyptian pound became fixed in value at $4.94,3 in 1887.

‡ The Netherlands florin fluctuated up to the year 1880, when it became fixed at 40.2 cents.

C.—*Quarterly valuations of fluctuating currencies.*

Countries.	Monetary unit.	1898. Jan. 1.	1898. April 1.	1898. July 1.	1898. Oct. 1.	1899. Jan. 1.	1899. April 1.	1899. July 1.	1899. Oct. 1.
Bolivia	Silver boliviano.	$0.42,4	$0.40,9	$0.41,8	$0.43,6	$0.43,9	$0.43,4	$0.44,3	$0.43,6
Central America.	Silver peso	.41,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3	.43,6
China	Amoy tael	.68,5	.66,2	.67,6	.70,6	.71	.70,2	.71,6	.70,5
	Canton tael	.68,3	.66	.67,4	.70,4	.70,8	.70	.71,4	.70,3
	Chefoo tael	.65,5	.63,3	.64,6	.67,5	.67,9	.67,2	.68,4	.67,4
	Chinkiang tael	.66,9	.64,6	.66	.69	.69,3	.68,6	.69,9	.68,9
	Fuchau tael	.63,4	.61,2	.62,5	.65,3	.65,6	.65	.66,2	.65,2
	Haikwan tael	.69,7	.67,3	.68,8	.71,8	.72,2	.71,4	.72,8	.71,8
	Hankau tael	.64,1	.61,9	.63,2	.66	.66,4	.65,7	.67	.66
	Hongkong tael	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
	Ningpo tael	.64,3	.63	.65	.67,9	.68,2	.67,5	.68,8	.67,8
	Niuchwang tael	.65,9	.62	.63,4	.66,2	.66,5	.65,9	.67,1	.66,1
	Shanghai tael	.62,6	.60,4	.61,7	.64,5	.64,8	.64,1	.65,4	.64,4
	Swatow tael	.63,3	.61,1	.62,4	.65,2	.65,5	.64,9	.66,1	.65,1
	Takao tael	.66	.66,6	.68	.71	.71,4	.70,7	.72	.71
	Tientsin tael	.66,4	.64,1	.65,5	.68,4	.68,8	.68	.69,4	.68,3
Colombia	Silver peso	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3	.43,6
Ecuador	...do...	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3	.43,6
India	Silver rupee†	.20,1	.19,1	.19,9	.20,7	.20,8	.20,6	.21	.20,7
Mexico	Silver dollar	.46	.44,4	.45,4	.47,4	.47,7	.47,2	.48,1	.47,4
Persia	Silver kran	.07,8	.07,5	.07,7	.08	.08,1	.08	.08,2	.08
Peru	Silver sol	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3	.43,6

Countries.	Monetary unit.	1900. Jan. 1.	1900. April 1.	1900. July 1.	1900. Oct. 1.	1901. Jan. 1.
Bolivia	Silver boliviano.	$0.42,7	$0.43,6	$0.43,8	$0.45,1	$0.46,8
Central America	Silver peso	.42,7	.43,6	.43,8	.45,1	.46,5
China	Amoy tael	.69,1	.70,5	.70,9	.72,9	.75,7
	Canton tael	.68,9	.70,3	.70,7	.72,7	.75,5
	Chefoo tael	.66,1	.67,4	.67,8	.69,7	.72,4
	Chinkiang tael	.67,5	.68,8	.69,3	.71,2	.74
	Fuchau tael	.64	.65,2	.65,6	.67,4	.70,1
	Haikwan tael	.70,3	.71,7	.72,1	.74,2	.77,1
	Hankau tael	.64,7	.65,9	.66,3	.68,2	.70,9
	Hongkong tael	(*)	(*)	(*)	(*)	(*)
	Ningpo tael	.66,5	.67,7	.68,2	.70,1	.72,8
	Niuchwang tael	.64,8	.66,1	.66,5	.68,4	.71
	Shanghai tael	.63,1	.64,4	.64,8	.66,6	.69,2
	Swatow tael	.63,9	.65,1	.65,5	.67,4	.70
	Takao tael	.69,6	.70,9	.71,4	.73,4	.76,2
	Tientsin tael	.67	.68,3	.68,7	.70,7	.73,4
Colombia	Silver peso	.42,7	.43,6	.43,8	.45,1	.46,8
Ecuador	...do...	.42,7	.43,6	.43,8	.45,1	.46,8
India	Silver rupee†	.20,3	.20,7	.20,8	.....	.....
Mexico	Silver dollar	.46,4	.47,3	.47,6	.49,0	.50,9
Persia	Silver kran	.07,9	.08	.08,1	.08,3	.08,6
Peru	Silver sol	.42,7	.43,6	.43,8	.48,7	.....

* The "British dollar" has the same legal value as the Mexican dollar in Hongkong, the Straits Settlements, and Labuan.

† The sovereign is the standard coin of India, but the rupee is the money of account.

FOREIGN WEIGHTS AND MEASURES.

The following table embraces only such weights and measures as are given from time to time in CONSULAR REPORTS and in Commercial Relations:

Foreign weights and measures, with American equivalents.

Denominations.	Where used.	American equivalents.
Almude	Portugal	4.422 gallons.
Ardeb	Egypt	7.6907 bushels.
Are	Metric	0.02471 acre.
Arobe	Paraguay	25 pounds.
Arratel or libra	Portugal	1.011 pounds.
Arroba (dry)	Argentine Republic	25.3175 pounds.
Do	Brazil	32.38 pounds.
Do	Cuba	25.3664 pounds.
Do	Portugal	32.38 pounds.
Do	Spain	25.36 pounds.
Do	Venezuela	25.4024 pounds.
Arroba (liquid)	Cuba, Spain, and Venezuela	4.263 gallons.
Arshine	Russia	28 inches.
Arshine (square)	do	5.44 square feet.
Artel	Morocco	1.12 pounds.
Baril	Argentine Republic and Mexico	20.0787 gallons.
Barrel	Malta (customs)	11.4 gallons.
Do	Spain (raisins)	100 pounds.
Berkovets	Russia	361.12 pounds.
Bongkal	India	832 grains.
Bouw	Sumatra	7,096.5 square meters.
Bu	Japan	0.1 inch.
Butt (wine)	Spain	140 gallons.
Caffiso	Malta	5.4 gallons.
Candy	India (Bombay)	529 pounds.
Do	India (Madras)	500 pounds.
Cantar	Morocco	113 pounds.
Do	Syria (Damascus)	575 pounds.
Do	Turkey	124.7036 pounds.
Cantaro (cantar)	Malta	175 pounds.
Carga	Mexico and Salvador	300 pounds.
Catty	China	1.333⅓ (1⅓) pounds.
Do*	Japan	1.31 pounds.
Do	Java, Siam, and Malacca	1.35 pounds.
Do	Sumatra	2.12 pounds.
Centaro	Central America	4.2631 gallons.
Centner	Bremen and Brunswick	117.5 pounds.
Do	Darmstadt	110.24 pounds.
Do	Denmark and Norway	110.11 pounds.
Do	Nuremberg	112.43 pounds.
Do	Prussia	113.44 pounds.
Do	Sweden	93.7 pounds.
Do	Vienna	123.5 pounds.
Do	Zollverein	110.24 pounds.
Do	Double or metric	220.46 pounds.
Chih	China	14 inches.

*More frequently called "kin." Among merchants in the treaty ports it equals 1.33⅓ pounds avoirdupois.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Coyan	Sarawak	3,098 pounds.
Do	Siam (Koyan)	2,667 pounds.
Cuadra	Argentine Republic	4.2 acres.
Do	Paraguay	78.9 yards.
Do	Paraguay (square)	8.077 square feet.
Do	Uruguay	Nearly 2 acres.
Cubic meter	Metric	35.3 cubic feet.
Cwt. (hundredweight)	British	112 pounds.
Dessiatine	Russia	2.6997 acres.
Do	Spain	1.599 bushels.
Drachme	Greece	Half ounce.
Egyptian weights and measures	(*See* CONSULAR REPORTS No. 144.)	
Fanega (dry)	Central America	1.5745 bushels.
Do	Chile	2.575 bushels.
Do	Cuba	1.599 bushels.
Do	Mexico	1.54728 bushels.
Do	Morocco	Strike fanega, 90 bs.; full fanega, 118 lbs.
Do	Uruguay (double)	7.776 bushels.
Do	Uruguay (single)	3.888 bushels.
Do	Venezuela	1.599 bushels.
Fanega (liquid)	Spain	16 gallons.
Feddan	Egypt	1.03 acres.
Frail (raisins)	Spain	50 pounds.
Frasco	Argentine Republic	2.5096 quarts.
Do	Mexico	2.5 quarts.
Frasila	Zanzibar	35 pounds.
Fuder	Luxemburg	264.17 gallons.
Garnice	Russian Poland	0.88 gallon.
Gram	Metric	15.432 grains.
Hectare	do	2.471 acres.
Hectoliter:		
Dry	do	2.838 bushels.
Liquid	do	26.417 gallons.
Joch	Austria-Hungary	1.422 acres.
Ken	Japan	6 feet.
Kilogram (kilo)	Metric	2.2046 pounds.
Kilometer	do	0.621376 mile.
Klafter	Russia	216 cubic feet.
Koku	Japan	4.9629 bushels.
Korree	Russia	3.5 bushels.
Kwan	Japan	8.28 pounds.
Last	Belgium and Holland	85.134 bushels.
Do	England (dry malt)	82.52 bushels.
Do	Germany	2 metric tons (4,480 pounds).
Do	Prussia	112.29 bushels.
Do	Russian Poland	11⅓ bushels.
Do	Spain (salt)	4,760 pounds.
League (land)	Paraguay	4,633 acres.
Li	China	2,115 feet.
Libra (pound)	Argentine Republic	1.0127 pounds.
Do	Central America	1.043 pounds.
Do	Chile	1.014 pounds.
Do	Cuba	1.0161 pounds.
Do	Mexico	1.01465 pounds.
Do	Peru	1.0143 pounds.
Do	Portugal	1.011 pounds.
Do	Spain	1.0144 pounds.
Do	Uruguay	1.0143 pounds.
Do	Venezuela	1.0161 pounds.
Liter	Metric	1.0567 quarts.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Livre (pound)	Greece	1.1 pounds.
Do	Guiana	1.0791 pounds.
Load	England (timber)	Square, 50 cubic feet; unhewn, 40 cubic feet; inch planks, 600 superficial feet.
Manzana	Costa Rica	1⅘ acres.
Do	Nicaragua and Salvador	1.727 acres.
Marc	Bolivia	0.507 pound.
Maund	India	82⅔ pounds.
Meter	Metric	39.37 inches.
Mil	Denmark	4.68 miles.
Do	Denmark (geographical)	4.61 miles.
Milla	Nicaragua and Honduras	1.1493 miles.
Morgen	Prussia	0.63 acre.
Oke	Egypt	2.7225 pounds.
Do	Greece	2.84 pounds.
Do	Hungary	3.0817 pounds
Do	Turkey	2.85418 pounds.
Do	Hungary and Wallachia	2.5 pints.
Pic	Egypt	21¼ inches.
Picul	Borneo and Celebes	135.64 pounds.
Do	China, Japan, and Sumatra	133⅓ pounds.
Do	Java	135.1 pounds.
Do	Philippine Islands	137.9 pounds.
Pie	Argentine Republic	0.9478 foot.
Do	Spain	0.91407 foot.
Pik	Turkey	27.9 inches.
Pood	Russia	36.112 pounds.
Pund (pound)	Denmark and Sweden	1.102 pounds.
Quarter	Great Britain	8.252 bushels.
Do	London (coal)	36 bushels.
Quintal	Argentine Republic	101.42 pounds.
Do	Brazil	130.06 pounds.
Do	Castile,* Chile, Mexico, and Peru	101.41 pounds.
Do	Greece	123.2 pounds.
Do	Newfoundland (fish)	112 pounds.
Do	Paraguay	100 pounds.
Do	Syria	125 pounds.
Do	Metric	220.46 pounds.
Rottle	Palestine	6 pounds.
Do	Syria	5¾ pounds.
Sagen	Russia	7 feet.
Salm	Malta	490 pounds.
Se	Japan	0.02451 acres.
Seer	India	1 pound 13 ounces.
Shaku	Japan	11.9305 inches.
Sho	do	1.6 quarts.
Standard (St. Petersburg)	Lumber measure	165 cubic feet.
Stone	British	14 pounds.
Suerte	Uruguay	2,700 cuadras (see cuadra).
Sun	Japan	1.193 inches.
Tael	Cochin China	590.75 grains (troy).
Tan	Japan	0.25 acre.
To	do	2 pecks.
Ton	Space measure	40 cubic feet.
Tonde (cereals)	Denmark	3.94783 bushels.
Tondeland	do	1.36 acres.
Tsubo	Japan	6 feet square.

*Although the metric weights are used officially in Spain, the Castile quintal is employed in commerce in the Peninsula and colonies, save in Catalonia; the Catalan quintal equals 91.71 pounds.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Tsun	China	1.41 inches.
Tunna	Sweden	4.5 bushels.
Tunnland	Sweden	1.22 acres.
Vara	Argentine Republic	34.1208 inches.
Do	Central America	32.87 inches.
Do	Chile and Peru	33.367 inches.
Do	Cuba	33.384 inches.
Do	Curaçao	33.375 inches.
Do	Mexico	33 inches.
Do	Paraguay	34 inches.
Do	Spain	0.914117 yard.
Do	Venezuela	33.384 inches.
Vedro	Russia	2.707 gallons.
Vergees	Isle of Jersey	71.1 square rods.
Verst	Russia	0.663 mile.
Vlocka	Russian Poland	41.98 acres.

METRIC WEIGHTS AND MEASURES.

Metric weights.

Milligram ($\frac{1}{1000}$ gram) equals 0.0154 grain.
Centigram ($\frac{1}{100}$ gram) equals 0.1543 grain.
Decigram ($\frac{1}{10}$ gram) equals 1.5432 grains.
Gram equals 15.432 grains.
Decagram (10 grams) equals 0.3527 ounce.
Hectogram (100 grams) equals 3.5274 ounces.
Kilogram (1,000 grams) equals 2.2046 pounds.
Myriagram (10,000 grams) equals 22.046 pounds.
Quintal (100,000 grams) equals 220.46 pounds.
Millier or tonnea—ton (1,000,000 grams) equals 2,204.6 pounds.

Metric dry measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.061 cubic inch.
Centiliter ($\frac{1}{100}$ liter) equals 0.6102 cubic inch.
Deciliter ($\frac{1}{10}$ liter) equals 6.1022 cubic inches.
Liter equals 0.908 quart.
Decaliter (10 liters) equals 9.08 quarts.
Hectoliter (100 liters) equals 2.838 bushels.
Kiloliter (1,000 liters) equals 1.308 cubic yards.

Metric liquid measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.0388 fluid ounce.
Centiliter ($\frac{1}{100}$ liter) equals 0.338 fluid ounce.
Deciliter ($\frac{1}{10}$ liter) equals 0.845 gill.
Liter equals 1.0567 quarts.
Decaliter (10 liters) equals 2.6418 gallons.
Hectoliter (100 liters) equals 26.417 gallons.
Kiloliter (1,000 liters) equals 264.18 gallons.

Metric measures of length.

Millimeter ($\frac{1}{1000}$ meter) equals 0.0394 inch.
Centimeter ($\frac{1}{100}$ meter) equals 0.3937 inch.
Decimeter ($\frac{1}{10}$ meter) equals 3.937 inches.

Meter equals 39.37 inches.
Decameter (10 meters) equals 393.7 inches.
Hectometer (100 meters) equals 328 feet 1 inch.
Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).
Myriameter (10,000 meters) equals 6.2137 miles.

Metric surface measures.

Centare (1 square meter) equals 1,550 square inches.
Are (100 square meters) equals 119.6 square yards.
Hectare (10,000 square meters) equals 2.471 acres.

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A GENERAL SURVEY OF FOREIGN TRADE.*

During the calendar year just ended, the inundation of foreign markets by American goods proceeded on the lines indicated in previous issues of the Review of the World's Commerce with a constantly growing volume and force which have surmounted many difficult obstacles and offer a strong temptation to overconfidence in our capabilities as an exporting nation. At the present time, the United States may be said to be nearing the top wave of industrial eminence, and there is ample reason for the belief that the next few years will witness a great expansion in the sale of our more highly developed manufactures. But in the annual reports of our consular officers for the year 1900, there runs, along with a common note of satisfaction, a warning, here and there, of a more strenuous competition which, in the end, may counterbalance our superior advantages to a considerable extent and check our progress in the world's markets, unless we equip ourselves in the meantime for the ultimate phases of the struggle.

Nothing could well be more gratifying than the picture of our foreign trade as it is to-day by comparison with the figures of very recent years. It is all the more remarkable because our progress has been achieved with but little effort and by means not directed specifically to the promotion of foreign trade, but largely fortuitous,

*Extract from the Review of the World's Commerce, introductory to Commercial Relations of the United States, 1900 (in press). The Review is also printed as a separate pamphlet. Applications for it, as also for the two bound volumes Commercial Relations, should be addressed to the Chief of the Bureau of Foreign Commerce, Department of State, Washington, U. S. A.

and springing from our intense absorption, for many years, in domestic industry and internal development. In other words, we have reached a surprising eminence in the exportation of manufactured goods, not because we were seeking that goal, but because, in developing our resources, in manufacturing for the home market, we attained an excellence and comparative cheapness of production which, to the astonishment of ourselves as well as of the world at large, has suddenly made us a formidable competitor—perhaps the most formidable of all—in the great international rivalry for trade.

The question for the future is whether we can permanently hold the position we seem about to gain, by means of what may be termed our purely domestic advantages of economy of production, greater labor efficiency, and cheap raw materials, or whether we shall not have to fight hard against nations now falling behind us, with weapons specially fashioned for controlling foreign trade—as, for example, more scientific export methods, better facilities of banking and transportation, more liberal credits, and manufacturing for particular markets with intelligent regard to climatic and race requirements. Many of our consuls still tell us that our commercial activity abroad is almost primitive in the details of trade competition, although of late our exporters have begun to send capable representatives to the more important trade centers; and the past few years have witnessed the creation of important trade organizations in the United States for the study of foreign commerce, the adoption of special courses of commerce at a number of our colleges, and the establishment of sample rooms and agencies for the sale of American goods at a few of the entrepôts of countries which offer a favorable field. Meanwhile, foreign manufacturers are introducing our labor-saving machinery or imitating it, and European economists are urging industrial reforms or legislative enactments to meet our threatening competition.

GROWTH OF MANUFACTURED EXPORTS.

During the year ended December 31, 1900, according to United States Treasury returns,* the imports of the United States amounted in round numbers to $830,000,000, an increase of over $30,000,000 compared with 1899, while the exports aggregated $1,478,000,000, an increase of $202,480,000. The exports in 1900 exceeded the imports by $648,900,000. Of the exports, the percentage of manufactured goods rose to 31.54† for 1900, against 30.39 in 1899, 24.96 in 1898, and 24.93 in 1895. Of the imports, nearly 45 per cent, it is

* Preliminary figures from the Bureau of Statistics, December, 1900.

† Later returns give the percentage as 30.38. This decline is attributed to the increase in the proportion of agricultural exports at the end of the year; also to the decrease in exports of copper ingots and cotton cloths, the latter mainly to the Chinese Empire.

estimated by the Treasury, were materials, either crude or partly made up, for use in our manufacturing industries, an increase of over 35 per cent in 1899 and 1900, as compared with the entire period from 1890 to 1898. In other words, our industrial growth continued in 1900 at a rapid pace, enabling us to take less finished goods from other countries and to furnish more.

PREDOMINANCE IN IRON AND STEEL.

The most striking fact in our export development is the remarkable growth of the foreign demand for our iron and steel, our exports amounting to nearly $130,000,000 in 1900, against $32,000,000 in 1895. In an article in the New York Evening Post of January 12, 1901, Mr. Andrew Carnegie says the United States has not only supplied its own wants, "but is competing to supply the wants of the world, not only in steel, but in the thousand and one articles of which steel is the chief component part," and expresses the opinion that the increasing demand from the world at large "can be met only by the United States." "The influence of our steel-making capacity," adds Mr. Carnegie, "must be marvelous, for the nation which makes the cheapest steel has the other nations at its feet as far as manufacturing is concerned in most of its branches. The cheapest steel means the cheapest ships, the cheapest machinery, the cheapest thousand and one articles of which steel is the base."

CHEAPNESS OF AMERICAN GOODS.

It is the relative cheapness of American steel that has given it preeminence, and it is the same with other products that are winning their way abroad. Economy of production is the master key that unlocks for us markets that seemed a little while ago to be inexorably closed. This economy of production implies not merely low prices to the foreign consumer, but a greater degree of excellence, a superior adaptation to his wants. As has been pointed out in the Reviews, as well as elsewhere, the American workingman, though receiving higher wages, produces, with labor-saving machinery, at a lower unit of cost, and his greater application and ingenuity enable him to avail himself effectively of the most recent inventions and appliances for improving the quality of his special line of work. The American factory system is highly organized and more efficient than any other, and, if our export trade were as well developed, there would be little to fear. The only lesson our manufacturers need to learn, it would seem, is the necessity of manufacturing especially for foreign trade; and the great increase of requests for information from our consuls as to the kinds of goods wanted in particular markets, and also of manufacturing processes

employed in this or that line of industry, encourages the hope that there is beginning to be a general perception of this important fact.

BRITISH ESTIMATES OF AMERICAN PROGRESS.

It is evident that foreign observers are keenly alive to the greater efficiency of our industrial methods, and are seeking earnestly to profit by them. A writer in the London Times of December 29, 1900, attributes the American manufacturer's advantages over the British largely to the consideration shown to young men and the willingness to utilize their energy and enterprise. He lays stress upon the fact that it is customary for American fathers "to discuss their business affairs with their sons in a way that is quite surprising to an Englishman," and adds:

> A good many years ago, I spent a few evenings with some students of one of the large American colleges. I was new to America then, and heard with surprise these college youths discussing questions that arose out of the business in which their fathers were engaged. If we compare this with what generally happens when lads of our own public schools or young men at our own universities meet together—when any mention of the paternal shop would be looked on as the worst of bad form—I think perhaps there will be seen one of the reasons why Americans are fitted to control business at an earlier age than is usual in this country.

The American youth, it is pointed out, obtains his business education from practical experience and social intercourse, and this form of education is held to be "immeasurably above the mere learning of lessons which too often goes by the name of education." Another reason for the adaptability of American youth to business is stated to be the public-school system, which is "more truly educational, less pedagogic." In conclusion, the Times correspondent says:

> To me, it appears one of the most disquieting factors in the problem before us (industrial competition) that the United States have trained a body of young men who are determined to make their country great, and who have been educated to a living, practical interest in the things needful to that end.

The Times, commenting editorially on these views and upon others expressed in a previous series of articles, says: "The threatened competition [of United States manufacturers] in markets hitherto our own comes from efficiency in production such as has never before been seen," and accepts the view that this efficiency is to be ascribed, to a large extent, to the practical self-education of Americans, which enables them generally to enter business "with a stock of knowledge of which the young Englishman fresh from the university or a public school has not an inkling." Further on the Times says:

> In the interesting analysis of the causes at work adverse to England, something might be said of the great intelligence and zeal put into affairs. The American man of business takes his pleasure in what he is doing, and never fails when he is

traveling to look out for hints to be applied when he returns home. Not afraid to admit that he is "in pork" or "in grain" if the fact be so, he is curious as to all that affects his business, and he is open to new ideas in a way which is unusual with us. "What has succeeded in the past will not succeed in the future" is a working maxim with the best men of business, who are ready to throw their experience as well as their antiquated machinery on the scrap heap. There are some signs of a change in this respect in this country; but the idea that there is something respectable, solid, and satisfactory in doing in the mill, workshop, and counting house what one's father did dies hard.

The London Spectator of December 29, 1900, quotes "a competent writer" in a British trade paper as saying:

From a careful calculation, made after comparing notes with other observers, and taking the figure 1 to 1¼ as representing the producing capacity of the ordinary British workman, I consider the Swiss-German as fairly represented by 1¾ and the Yankee by 2¼.

In an article entitled "America's changed international position," the London Statist of January 5, 1901, also dwells upon the superiority of our methods of production as enabling us to take advantage of the needs of Europe and to respond to an increased demand for manufactured goods. "All at once," says the Statist, "the United States became a keen competitor in the markets of the world with ourselves and with our continental rivals, and, in all reasonable probability, the competition will grow more eager as the years pass." The Statist, in fact, predicts "a great outburst of new enterprise in the United States."

CONCENTRATION OF CAPITAL IN THE UNITED STATES.

Lord Rosebery is quoted by cable as having said in a speech before a British chamber of commerce January 16, 1901, that the chief rivals to be feared by Great Britain "are America and Germany." "The alertness of the Americans," he continued, "their incalculable natural resources, their acuteness, their enterprise, their vast population, which will in all probability within the next twenty years reach 100,000,000, make them very formidable competitors with ourselves. And with the Germans, their slow but sure persistency, their scientific methods, and their conquering spirit, devoted as these qualities are at this moment to preparation for trade warfare, make them also, in my judgment, little less redoubtable than the Americans. There is one feature of the American competition which seems to me especially formidable, and as I have not seen it largely noticed, perhaps you will excuse me for calling attention to it. We are daily reminded of the gigantic fortunes which are accumulated in America, fortunes to which nothing in this country bears any relation whatever, and which in themselves constitute an enormous commercial force. The Americans, as it appears, are scarcely satisfied with these individual fortunes, but use

them, by combination in trusts, to make a capital and a power which, wielded as it is by one or two minds, is almost irresistible, and that, as it seems to me, if concentrated upon Great Britain as an engine in the trade warfare is a danger which we can not afford to disregard. Suppose a trust of many millions, of a few men combined so to compete with any trade in this country by underselling all its products, even at a considerable loss to themselves, and we can see in that what are the possibilities of the commercial outcome of the immediate future."

It has been evident for some time that the United States, not content with having solved that part of the problem of economy of production which relates to processes of manufacture and the utilization of labor, has been drifting instinctively towards the larger question of the concentration of capital as the logical development of the same general idea of reducing cost and increasing the margin of profit. The question is larger because it has a more direct and more general bearing upon the economic and social life of the nation, upon the interests, real or imagined, of the whole body politic. We have to do with it here only because of its relation to and possible effect upon our foreign trade, and it is interesting to know that so thoughtful an observer as Lord Rosebery perceives in the simplification of the use of capital in the United States which is going on—it may be said experimentally, to a large extent as yet—a tremendous power in the commercial rivalry of the world.

GERMAN VIEWS OF AMERICAN COMPETITION.

Germany, as well as Great Britain, seems fully sensible of the seriousness of American competition. In a recent issue, the Hamburger Fremdenblatt* points out that the United States, which ten years ago exported more than 80 per cent of agricultural products and less than a fifth of manufactured goods, to-day draws nearly a third of its entire exports from the products of its factories. "In other words, the Union is marching with gigantic strides towards conversion from an agricultural to an industrial nation." "Does not the rapid increase of the United States in the value of industrial exports," the Fremdenblatt asks, "constitute an imminent danger for all competing nations?" Continuing, the Fremdenblatt says:

If we now turn to an investigation of all the elements which have produced this tremendous, this almost incredible, revolution in the world's situation, it is impossible within our present limits to consider all the factors which are of importance to German interests as well as essential to a comprehensive conclusion. Competent experts, well informed as to the industrial and export conditions which prevail in the United States, have established the following facts:

The steel manufactories of the United States, which two decades ago were in

* Article translated by Consul-General Mason. See ADVANCE SHEETS No. 934 (January 14, 1901).

their infancy, to-day control the markets of the world, dictate either directly or indirectly the prices of iron and steel in all countries, and partly through the richness of their supply of iron ores and coal, partly by the use of labor-saving machinery and skillful, effective means of transportation, have attained a position to not only compete with the older iron and steel producing countries, but even to profitably export their products to England.

American tools, especially hatchets, axes, files, saws, boring implements, etc., enjoy, by reason of their excellent quality, the best reputation, and, in spite of their higher price, stand above competition in nearly the whole world. Also in sewing machines, bicycles, and agricultural implements of every kind, the United States has begun to drive England and Germany from the world's markets, especially that of Russia, which may be partly attributed to the fact that American firms are protected in their own market from foreign competition and can thus sell their manufactures cheaper abroad than at home.

A remarkable change has also taken place in the field of boot and shoe production. Hardly more than ten years ago the United States imported shoes from Europe—especially women's foot wear from Austria, while other grades were made of leather imported from England and Germany. To-day, it not only makes its entire supply of leather at home and exports it in considerable quantities, but it floods Europe with ready-made shoes, competes with the products of cheap labor in England, establishes shoe depots in Paris and even in the principal cities of Germany.

That the United States, by reason of its richness in mineral oils and aided by its unrivaled facilities for refining and transporting this international necessity, controls the petroleum trade of the world and is held in check only by Russia is well known, and the fact is only cited here in order to include this weighty factor in the calculation. The experience of the past few months proves that within a not far distant period, the coal of the United States will play the same rôle in the markets of the world. The Union has reversed the old adage, "It is ridiculous to carry coals to Newcastle," for to-day anthracite coals from Pennsylvania are actually exported to England.

Incidentally, it may be remarked that the typewriting machine with which this article is written, as well as the thousands—nay, hundreds of thousands—of others that are in use throughout the world, were made in America; that it stands on an American table, in an office furnished with American desks, bookcases, and chairs, which can not be made in Europe of equal quality, so practical and convenient, for a similar price. The list of such articles, apparently unimportant in themselves, but in their aggregate number and value of the highest significance, could be extended indefinitely. But it would seem more interesting and characteristic to cite the fact that an American syndicate is now planning, and has even taken the initial steps in a scheme, to take in hand the whole sleeping-car service of Europe, to improve it and make it cheaper than is now possible. Moreover, American manufacturers of underclothing, gloves, and men's clothing, as well as women's cloaks—all articles which a few years ago were exported in vast quantities from Europe to the United States—are already beginning to calculate how they can place their surplus output in European markets.

The Fremdenblatt's conclusion is that Europe "must fight Americanism with its own methods; the battle must be fought with their weapons, and wherever possible their weapons must be bettered and improved by us. Or, to speak with other and more practical words, Germany—Europe—must adopt improved and progressive methods in every department of industry; must use more, and more

effective, machinery. Manufacturers as well as merchants must go to America, send thither their assistants and workingmen, not merely to superficially observe the methods there employed, but to study them thoroughly, to adopt them, and wherever possible to improve upon them, just as the Americans have done and are still doing in Europe."

SERVICES OF UNITED STATES CONSULS.

Dr. Vosberg-Rekow, head of the German bureau for the preparation of commercial treaties,* attributes the remarkable growth of exports of American manufactures to Europe in part to the activity of our consular service. "The United States," he says "has covered Europe with a network of consulates and makes its consuls at the same time inspectors of our exports and vigilant sentinels, who spy out every trade opening or advantage and promptly report it." Dr. Vosberg-Rekow also dwells upon the eminently practical character of American industrial and business methods. "Germany's industrial advancement," he says, "is principally due to the thoroughness of her technical education. It is strengthened by the continuous substituting of machinery and machine tools for hand labor. Still, in this respect, the English industry in some branches is ahead of us. It is worthy of note that in this evolution, too, the United States has the foremost place and has made gigantic strides, not only in applying machine tools, but in inventing and manufacturing them, so that to-day she supplies us. This signalizes in an extraordinary degree American intelligence. Thus, the Americans, though wanting our superior technical education, thanks to their practical eye improve upon our methods and apparatus. Theirs is rather the activity of an experimentalist than that of a trained craftsman; but a clever faiseur, if he but have assurance and luck, may distance the educated master. The Americans have no thorough education; nor do they possess a modern industrial system as we Europeans understand the term. The American applies himself to a single branch or to a specialty, with utter disregard of European methods and their results; he devotes to his work an amount of energy which stupefies Europeans; and, for awhile, he succeeds in driving us out of the line of articles on which he has centered his energy. Against such peculiar activity a general trade policy is quite ineffectual; we must put ourselves in condition to counteract this artificially forced growth of specialized industry."

EDUCATION IN BUSINESS.

Thus we find that expert opinion in Great Britain and Germany coincides in the conclusion that Americans, too eager to be up and

*See ADVANCE SHEETS No. 873 (October 30, 1900).

doing to apply themselves to preparatory study or to what may be termed a general scheme of education and culture for industry and trade, have, nevertheless, worked out in practice a degree of actual efficiency, not learned from books, which gives them a distinct advantage. It is not to be denied, upon the other hand, that technical schools and special courses of commercial education might greatly enhance our capabilities, if care were taken to prevent them from usurping too far the practical business or industrial training which seems to be the secret of our success thus far. In the more and more strenuous competition which is evidently waiting us, our manufacturers, expórters, and trade representatives abroad will need to be provided with a variety of information which can not be acquired except by academic instruction. The knowledge gained in the workshop or the countinghouse will not suffice to meet a rivalry which is seeking to equip itself, so far as it can, with our machinery, our industrial and trade methods—with everything, in short, that now gives us supremacy—and will add to these the mastery of details of trade conditions and industrial processes throughout the world, which we are only beginning to study.

FINANCIAL INDEPENDENCE OF THE UNITED STATES.

There is another feature of American influence in the world's markets which is, perhaps, even more notable than our industrial progress, and that is our suddenly acquired financial independence. The Hamburger Fremdenblatt article previously quoted from points out that it is the logical result of our growth in industry and trade and especially of our successful competition in foreign markets. As soon as American industries, through various causes, found themselves in a favorable financial condition, "they likewise undertook the task of freeing themselves from foreign capital—in other words, of reclaiming the industrial securities which were in European hands." "The change in the condition of the United States," adds the Fremdenblatt, "can best be characterized by the statement that the industries, trade, agriculture, railroads, and finances of the Union each and all climbed, one upon another, through and by each other, steadily upward. And to what a height have they climbed!"

During the past year, the point was reached where the United States became a lender of money to other countries instead of a borrower from them. "Speaking roughly," says the London Statist (January 5, 1901), "the holdings of American securities in Europe now are immensely smaller than they were ten years ago, and the purchases have been made by the Americans out of the vast savings accumulated, first, during the anxious period from 1890 to 1896, and, secondly, during the prosperous period that has followed.

Many countries, however, are able to buy back their own securities without being in a position to take an important place in the international investment market. For example, Spain has bought back a very large proportion of her own securities. In the United States, not only has the buying back of American securities been on the great scale indicated, but during the past year or two American capitalists have lent largely to Europe. At the end of 1899, when there was great pressure in the money markets of Europe, about four millions of gold were allowed to be shipped from New York to London; and during the past year it will be recollected that gold was sent in considerable amounts, while about five millions sterling were invested in [British] Government funds. German Government funds were also bought amounting to about four millions sterling. Russia was able to borrow in order to purchase railway material. And it is understood that the United States was willing to lend likewise to Switzerland and to other governments. This is the most dramatic change that has occured for a very long time."

"The succession of extraordinary creditor balances," says the New York Journal of Commerce of January 10, 1901, "has virtually revolutionized our financial relations with the European centers. In a very important sense, we have become the creditor nation of the world. From a chronic condition of dependence upon the banking forces of London, Paris, and Berlin, we find those centers now dependent upon the large floating balances of the United States, subject to our lending ability in periods of exigency, carrying the largest stock of gold in the world and holding the largest resource for dealing with crises in international finance. Three of the foremost European governments—England, Germany, and Russia—have found it necessary to come to New York for important loans, and the two former have not applied in vain. Thus, if this city may not be said to have yet become the financial center of the world, we may incontestably claim a foremost rank among the few metropolitan cities which have won that distinction."

"One of the most important financial features of the year," says Bradstreet's (January 5, 1901), in its review of the stock market in 1900, "was the placing in Wall street and with American investors of issues of British consols, German Government bonds, and loans by Russia, Sweden, and other countries, giving point to the feeling that our market has taken the lead in the financial world."

THE FUTURE OF INTERNATIONAL COMPETITION.

Summed up, therefore, the general conclusion of competent foreign authorities, as well as of our own, is that the commercial expansion of the United States is no longer problematical, but a fact of

constantly enlarging proportions which opens up new vistas in the struggle for ascendency among the industrial powers. Prolific as it has been of great surprises, it is doubtful whether similar phenomena will spring from its undemonstrated forces. It would seem, now that the causes of our unlooked-for triumphs are known and are being carefully weighed and studied, that the future will be one of fruition, of the gradual maturing of our powers, rather than of sudden blossoming of some novel capacity of competition. The day, perhaps, is not distant when the more intelligent of our rivals will be able to meet us upon more nearly equal terms and when, as has already been indicated, it will be necessary to supplement our natural advantages and our highly developed industrial efficiency with the appliances of education, of special training, of technical skill, of more scientific methods of extending trade, which have already secured rich returns—to Germany, for example—in quarters of the globe where our goods, as yet, have made but little if any headway.

RECIPROCAL TRADE AGREEMENTS.

Among the measures which have already forced themselves upon our attention as necessary aids to our expanding commerce are reciprocal trade agreements and better facilities of transportation and banking. Substantial progress has been made in securing the first of these. According to a paper in the Forum for December, 1900, by Mr. John Ball Osborne, joint secretary of the United States Reciprocity Commission, of which the Hon. John A. Kasson is the head, the following agreements not requiring ratification by the Senate have been concluded and are in force:

I. With France, operative from June 1, 1898. Under this agreement, France obtains all the concessions provided in section 3 of the United States tariff law, except for champagne and other sparkling wines. It is provided in the agreement, at the instance of the American negotiator, Mr. Kasson, that the concession on still wines and vermuth may be withdrawn from France, in the discretion of the President of the United States, whenever additional duties beyond those now existing and deemed by him to be unjust shall be imposed by France on our products. In compensation, the United States secures from France her minimum tariff, not exceeding certain rates specified in the agreement, on canned meats, fresh table fruits, dried or pressed fruits (excluding raisins), logs, timber and lumber, paving blocks, staves, hops, apples and pears (crushed or cut and dried), manufactured and prepared pork meats, lard and its compounds.

"The way in which this agreement has operated during a period of nearly two years," says Mr. Osborne, "is shown by the statistical

tables prepared from official sources at the Treasury Department. Examination of the statistics in the tables shows that the United States exports to France of concessional articles increased 74 per cent in value, while the imports into the United States of French merchandise affected by the agreement increased less than 5 per cent in value. Another remarkable fact is that there has been no increase of imports of French brandy and still wines, as had been feared by our producers."

II. With Portugal; put into effect by proclamation June 12, 1900; operative for five years. Portugal receives the same concessions as those granted to France, excepting on vermuth, and, in addition, the reduced rates on sparkling wines. As Portugal is not a producer of the latter, their inclusion has no practical effect. Reciprocally, Portugal guarantees that the lowest rates which shall be granted to any other country (Spain and Brazil excepted) shall be enjoyed, on their importation into Portugal and the Azores and Madeira islands, by the following products of the United States, viz: Flour of cereals (except wheat), maize and wheat in the grain, lard and grease, mineral oils and certain important products thereof; reaping, mowing, and thrashing machines; machines for compressing hay and straw; steam plows, separate parts of these machines, and plowshares; instruments, implements, and tools for the arts, manufactures, agriculture, and gardening. On most of these articles low rates are specified which shall not be exceeded. The guaranty of the minimum rates on United States petroleum is especially important, in view of the fact that Portugal had previously granted them, in a special arrangement, to Russian oils, thus giving the latter a decided advantage.

III. With Italy; proclaimed and put into effect July 18, 1900; terminable by either party at the end of the year 1903, if denounced one year in advance. The United States grants to Italy the identical concessions given to France under section 3, and, reciprocally, Italy guarantees that the duties on the following products of the United States shall not exceed certain specified rates: Cotton-seed oil, pickled or preserved fish (certain exceptions), agricultural machinery and detached parts, scientific instruments, dynamo-electrical machines and detached parts, sewing machines, and varnishes. On some of these articles, the Italian duties were reduced, and on others the continuance of the previous minimum rates was guaranteed. The United States also secures the free entry of turpentine oil, natural fertilizers of all kinds; crude, fresh, or dried skins, not suitable for furs; and fur skins.

IV. With Germany; put into effect by proclamation on July 13, 1900. It is terminable by either party on three months' notice.

The concessions secured thereunder by Germany are identical with those granted to France and Italy. Reciprocally, Germany guarantees to the products of the United States, on their entry into Germany, the tariff rates which have been conceded by the commercial treaties concluded during the years 1891–1894 between Germany, on the one part, and Belgium, Italy, Austria-Hungary, Roumania, Russia, Switzerland, and Servia, on the other part. "The treaties referred to," explains Mr. Osborne, "cover a large list of articles imported into Germany from the United States; and consequently, so long as the agreement shall remain in force, our commercial interests in that country will be on a most-favored-nation basis. As a further compensation, Germany agreed to annul the regulations providing that the dried or evaporated fruits imported from the United States be inspected on account of the San José scale. When the agreement became operative, this pledge was promptly fulfilled, much to the relief of the California fruit growers and of other United States exporters of the products in question. The conclusion of this agreement is not only beneficial to American commerce, but it has tended to soothe, if not to remove altogether, certain causes of international irritation."

Section 4 of the United States tariff law authorizes the President to negotiate treaties of reciprocity within specified limits. Under this provision, the following conventions have been concluded, the treaty term being five years, except in two instances, where it is four years:

I. With France; signed July 24, 1899. Under its provisions, says Mr. Osborne—

> France agrees that all articles of merchandise, the product of the soil or industry of the United States of America, exported to France or Algeria (whether shipped directly to a French or Algerian port or arriving by way of an intermediate port) shall be admitted into France and Algeria upon the payment only of the minimum rates of duty imposed on like articles of any other origin, excepting from this general provision nineteen articles only, viz: Horses, butter, lucerne and clover seed, fodder, cast iron; skins and hides, prepared; boots and shoes and parts of same; belts, cords, and other leather articles for machinery; dynamos, machine tools, dynamo conductors and parts, arc lamps known as regulators, sugar, green or dried chicory roots, eggs, cheese, honey, porcelain, and rough cardboard in sheets. These excepted articles are enumerated in order that the reader may perceive that the majority do not figure prominently, if at all, in our exports to France. In fact, only two, viz, boots and shoes and machine tools, are of much importance in a commercial sense. But even for these nineteen exceptions—which may possibly form the basis of a supplementary treaty—the American negotiator contended vigorously and persistently. On the other hand, the grant by France of her minimum tariff on every other conceivable product of United States soil or manufacture opens up a magnificent prospect for our diversified industries. The French tariff contains six hundred and fifty-four numbers. Deducting the nineteen excepted articles, there remain six hundred and thirty-five categories of merchandise on which the United States has obtained concessions. It would have made an imposing

array to have specified all of them in the treaty itself, but the United States commissioner wisely considered the universal clause as preferable. The average percentage of reduction from the rates of the maximum tariff made by France is 26.1 per cent, excluding mineral and vegetable oils, and 48 per cent, including them. On many articles, it is 50 and even 60 per cent. The average reduction on ninety-six products of the soil is over 32 per cent.

In return for these concessions, the United States agrees to the admission of certain specified products of France or Algeria at reductions in duty varying from 5 to 20 per cent of the existing rates. The enumerated articles comprise one hundred and twenty-six numbers of the United States tariff, which contains four hundred and sixty-three dutiable items. "The United States, therefore, reserves from its concessional list to France three hundred and thirty-seven categories of merchandise, whereas France, as we have seen, excepts only nineteen United States products from her grant of the minimum tariff. It is to be remembered, however, that France is only giving us what she has already conceded to European nations, while our concessions are made to France for the first time."

In addition to the foregoing, the United States agrees to extend to France or Algeria any reduction of duties upon sparkling wines or certain articles of woolen manufacture which may hereafter be conceded to any other country. The grant to Portugal, however, of reduced rates on sparkling wines does not inure to France, the Portuguese agreement having been concluded prior to this convention; and the general understanding is that no reduction of duties on woolen goods is contemplated.

Article IV provides that in case either contracting party, during the term of the convention, shall, by legislative action, increase the reduced rates stipulated in the treaty for the products of the other, or shall impose new restrictions or prohibitions upon importations from the other, the option is reserved to the other contracting party to terminate its obligations under the convention after six months' notice to that effect.

Article V provides that the treaty shall be ratified by both Governments and shall continue in force for the term of five years from the date of exchange of ratifications, and from year to year thereafter, until denounced by either contracting party by giving twelve months' notice to the other.

II. With the British West Indies. The following conventions with the British West Indies were negotiated in most instances by colonial delegates, who came to Washington for that purpose, but were signed by the diplomatic representative of the British Government:

Barbados.—Signed at Washington on June 16, 1899. The United States grants a concession of 12½ per cent reduction of the existing

duties on cane sugars and molasses, fresh fruit and vegetables, and asphalt or manjack. In return, Barbados agrees to the free admission of nineteen articles of United States exports, including vehicles, clocks, cycles and parts, machinery for electric lighting, corn and corn meal, cotton-seed oil, eggs, hay, horses, pitch, tar, resin, etc.; it also guarantees that the duties imposed on eight classes of goods, comprising fruits and vegetables, clothing, hardware, furniture, earthenware, glassware, wooden ware, and willow ware, shall not exceed 5 per cent ad valorem, and it specifies low rates, which shall not be increased, on twelve classes of United States merchandise.

British Guiana.—Signed July 18, 1899. The United States grants a reduction of 12½ per cent on cane sugars, fresh vegetables, and kaolin. The reciprocal concessions given by the colony are almost identical with those granted to the United States by Barbados, the articles being practically the same, with slight differences in the specified low rates in the third schedule.

Turks and Caicos islands.—Concluded July 21, 1899. The United States concedes a reduction of 12½ per cent merely on salt and unmanufactured sponges, and continues the free admission of unmanufactured and undressed sisal grass. Reciprocally, the islands grant exemption of customs duties on twenty-one products of the United States, including cereals and other farm products, manufactured goods of various kinds, iron, steel, copper, etc.; and on another list of nineteen articles low rates are specified, which shall not be increased.

Jamaica.—Signed July 22, 1899. The United States concedes a reduction of 12½ per cent of the duties on cane sugar and molasses; of 20 per cent on citrus fruits, pine apples, fresh vegetables, and rum; and the free entry of certain natural products of Jamaica not produced in this country. In compensation, Jamaica agrees to admit free of duty fifty-nine classes of products of United States soil and industry, including machinery, agricultural implements, and tools; telegraphic, telephonic, gas, and electrical apparatus and appliances; railway equipment, vehicles, steam engines; sewing machines, steel, zinc, coal, coke, fruit, fish, meat, etc. The colony also agrees upon certain low rates, which shall not be exceeded, on a further list of twenty articles of United States export, comprising farm products, lumber, cotton-seed oil, cotton cloths, petroleum, and wines.

Bermuda.—Concluded July 24, 1899. The United States grants a reduction of 20 per cent of the present duties on the island's early potatoes, its onions, tomatoes, and other fresh vegetables, as well as its bulbs and natural flowers. In return, we secure the free admission into the colony of thirty articles of merchandise, including fresh and canned fruits, vegetables, fresh and canned meats, dredging

machinery, agricultural implements, clocks, vehicles, cycles, cotton-seed oil and cake, naval stores, etc. Bermuda also agrees that on seven enumerated classes of articles, including cereals, flour, and furniture, the rate of duty shall not exceed 5 per cent ad valorem, and specifies a low rate for United States cattle.

Trinidad.—Concluded July 22, 1899, but failed to receive the assent of the colonial legislature. A second convention was then negotiated and signed on February 13, 1900, by United States Commissioner Kasson and Lord Pauncefote, the British ambassador. The stipulated period for exchange of ratifications has expired and, not having been extended, it has not been sent to the Senate.

III. With the Argentine Republic; signed at Buenos Ayres July 10, 1899. The United States concedes to Argentina a reduction of 20 per cent of the existing duties on sugar, hides of cattle, and certain kinds of wool. Reciprocally, Argentina grants the following concessions upon the products of the United States: (1) A reduction of 50 per cent of the duties (existing or which may be prescribed by law) on ten classes of articles, principally canned goods; (2) a reduction of 20 per cent of present or future rates on eight classes of articles, including bacon, all cereal foods, sail twine, and cotton rope; (3) a guaranty that the duties imposed on furniture made of oak, ash, or pine shall be calculated on a basis more favorable than at present; (4) a reduced rate of 15 per cent ad valorem on white, spruce, Oregon, and yellow pines, oak and ash lumber, undressed; (5) a guaranty of a fixed low rate on cotton-seed oil; and (6) the specification of reduced aforos on about thirteen articles largely imported from the United States. The aforos are valuations on imports which are fixed by the executive authority of Argentina as the basis for the assessment of ad valorem duties.

IV. With Nicaragua; concluded October 20, 1899.

V. With Denmark on behalf of the West Indian island of St. Croix; concluded June 5, 1900.

VI. With the Dominican Republic; signed at Washington June 25, 1900.

VII. With Ecuador; signed July 10, 1900.

The last four conventions have been submitted to the Senate, but have not been made public. The treaties with France, the British West Indies, and the Argentine Republic are still (January 23, 1901) pending in the Senate.

TRANSPORTATION FACILITIES AND TRADE.

It would seem to be evident that trade agreements widening the channels of exchange between the United States and other countries must have an important bearing upon the question of

building up a merchant marine. One of the great obstacles to the establishment of direct steamship lines from United States ports is the difficulty of obtaining return cargoes. Of course, this operates to the disadvantage of foreign lines engaged in carrying our trade, as well as a deterrent to the investment of American capital in transportation enterprises; but provision for securing a larger volume of freights both ways would seem to be an absolute prerequisite of a healthful revival of our shipping. It is a fact of great significance that wherever better facilities of transportation have been provided our foreign commerce has immediately grown, even in the face of obstacles that might have seemed insurmountable and in the absence of other measures for promoting trade. In view of the constantly spreading popularity of American goods, the element of hazard or speculative enterprise in seeking to open up a particular market would seem to have been reduced to a minimum. If we can compete successfully with European manufacturers in their home markets, we need not fear that the foreign markets which they supply will, under natural conditions, be slow in taking our superior products. The only barrier to their introduction will be the artificial one of tariff or other discriminating legislation, and this may be either removed or greatly modified by a judicious scheme of reciprocity. If to such agreements, securing favorable treatment of our exports, we add concessions permitting the importation of a larger volume of foreign products, we lay at once the basis for such exchange as may justify the establishment of direct transportation lines. In this view of the matter, our tariff concessions—framed with a careful regard for the protection of our home industries—are seen to involve substantial benefit to ourselves as well as to foreign producers, in the promise they hold out of acting as an incentive to the investment of American capital in the carrying trade as well as in the enlargement of our export of goods.

Conspicuous illustrations of the benefit of direct transportation and of the fact that increased trade follows its establishment are found in the recent growth in the export of American products to such unlikely quarters as Turkey and Peru. Some two years ago, our consul-general at Constantinople, Mr. Dickinson, exerted himself to secure the running of a direct line of steamers between the United States and Turkish ports on the Mediterranean.* The Barber Line of New York decided to make the experiment, and the service, begun in February, 1899, has greatly stimulated the sale of American products in the Levant. Under date of April 14, 1900,† Mr. Dickinson states that "since the establishment of the direct

*See ADVANCE SHEETS No. 318 (January 7, 1899).
†See ADVANCE SHEETS No. 743 (May 31, 1900).

line and the consequent reduction of freights, wire nails and a few other articles of American manufacture appear to have taken possession of the levantine markets." The next step taken by Mr. Dickinson, and one that was made possible by the improved transportation facilities, was the establishment by private capital of an exposition of American goods and agency which, he says, "is already [November 15, 1900] a success and has outgrown the expectations of those who are conducting the business."*

Peru increased her commerce with this country from $1,588,000 in 1897 to $3,491,000 in 1899, and during eleven months of 1900 our exports to Peru amounted to nearly $2,000,000, against something over $600,000 in 1893. Our consul at Callao, Mr. Dickey, attributes this gain in part, at least, to better transportation facilities offered by two steamship lines which, for the past three years, have kept up a monthly service between New York and the west coast of South America. There has been much speculation as to the cause of the slowness of the growth of our trade with South America, and, although several powerful influences may be adduced—as, for example, the greater activity of European exporters, the control of banking facilities by European capital and its large investments in South American enterprises, the influence of European immigration, and the special manufacture and packing of goods to meet the local requirements—it would appear that trade is awaiting us there, as well as elsewhere, if we provide it with easy and convenient channels.

This conclusion is emphasized when, coming nearer home, we find that our commerce has obtained a strong footing in regions which are not only closer to us, but have the speediest and most efficient means of communication—as Mexico, the West Indies, Central America, the north coast of South America. The same thing will probably be found to be true of our Pacific coast trade. Enlarged transportation facilities undoubtedly account, to a considerable extent, for the steady growth of our commerce with Japan.†

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*See ADVANCE SHEETS No. 896 (November 26, 1900).

†There are now a number of steamship lines with vessels plying to Japan and China from San Francisco and San Diego, Cal.; Portland, Ore.; Seattle, Port Townsend, and Tacoma, Wash. The New York Journal of Commerce of January 22, 1901, has the following with reference to new steamship facilities at Pacific coast ports:

"The American Hawaiian Steamship Company inaugurated during the past year a direct steamship service between New York, San Francisco, and Honolulu. The company will have a fleet of seven large cargo vessels for this service when all of the boats are finished.

"According to advices from Seattle, Wash., the Colonial Steamship Company will establish a line of freight steamers between Seattle and Manila, with the first sailing some time in April. Three steamships will be put on the route and a regular monthly schedule is to be arranged. A second line is already being planned by the China Mutual Steamship Company, and definite announcement of its establishment is expected. The ships will carry grain, lumber, supplies, and manufactured articles from Puget Sound and will bring back hemp and hard wood.

"The steamer *Guatemala*, carrying 3,327 tons of freight, will be due from Valparaiso at San Diego, Cal., about January 27, inaugurating the line established between the Chilean port and

The improvement of the means of communication between California and the west coast of Central and South America by the establishment of the German line of steamers running south from San Diego has caused a reduction of freights* and will undoubtedly augment the sale of our goods. Consul Greene of Antofagasta, Chile, says:†

The Pacific Steam Navigation Company, a British firm, and the South American, a Chilean company, are contemplating an extension of their lines from Central America to San Francisco.‡ This service, now being rendered by the Kosmos steamers, appears to be a success. The boats leave Valparaiso, call at the principal coast ports to Guayaquil, and go thence to Central American and North Pacific ports, not calling at Panama. They take and drop cargo on the trip north and generally return with full loads south. Formerly, Chilean wheat and flour had the coast trade as far as Guayaquil, but the Kosmos steamships, with their reasonable rates, now bring considerable lots, not only for coast supply, but for Bolivia, via Mollendo and this port.§

It is not to be expected that capital will invest in steamship lines or in other transportation enterprises unless it perceives a reasonable prospect of profit, but the history of railroad development in the United States sufficiently proves that capital is far from being timid in anticipating the possibilities of trade in a naturally productive

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San Diego by the Pacific Steam Navigation Company and the Compañia Sud Americana de Vapores, acting in conjunction. For years they have alternated in running vessels on the South American coast, and now it is understood they are to extend the same fortnightly service to the coast of California. The *Guatemala* is to be followed by the steamer *Palema*, of 2,553 tons, which will be due two weeks after the pioneer boat. The principal ports of Mexico and Central America will be included in the service, and the northern end of the run will be at San Francisco. At Valparaiso, the steamers will connect with vessels of the Pacific Steam Navigation Company, running to Liverpool.

"The Oregon and Oriental Steamship Company will start a new oriental steamship service from Portland, Oreg. The steamers will ply between Portland and Chinese and Japanese ports. The *Carmarthenshire* and *Monmouthshire* go via Manila and the others via Vladivostock, Siberia.

"The Great Northern Steamship Company was incorporated in Minnesota last August with a capital stock of $6,000,000. It is the company's intention to have a fleet of vessels to operate in connection with the Great Northern Railway for the oriental trade. The Great Northern has also chartered five steamers of the Leyland Line for five years to carry grain between Quebec and England. The service is to be weekly.

"The Oregon Railway and Navigation Company is to have four new boats for the China-Japan Line out of Portland, Oreg."

A letter from Seattle to the New York Evening Post, dated January 15, 1901, says:

"Two new lines of steamers have recently been put on between this port and the Hawaiian Islands, and a greatly increased trade in that direction is anticipated. There are now three lines of steamers running from Puget Sound to the Orient—the Northern Pacific steamers or the Dodwell Line, the Canadian Pacific or Empress Line, and the Great Northern or Nippon Yusen Kaisha (Japanese) Line. These three lines include some ten steamers, affording sailings about five times a month. For weeks past, all of their available freight space has been engaged long in advance, and a number of tramp steamers have cleared with oriental cargoes."

*See report of Consul-General McNally, of Guatemala, in ADVANCE SHEETS No. 867 (October 23, 1900).

†See ADVANCE SHEETS No. 854 (October 9, 1900).

‡The extension has been made. See ADVANCE SHEETS No. 919 (December 26, 1900).

§According to United States Treasury returns, our exports of wheat from San Francisco in 1900 amounted to 12,765,015 bushels, against 3,556,742 bushels in 1899. There is no statement as to the distribution of exports from San Francisco, but the exports of wheat to all South America amounted to 871,182 bushels in the first eleven months of 1900 (data for the entire year not being available), against 110,727 bushels in the same period of 1899, or against 530,333 bushels in the first eleven months of 1898.

territory which only awaits the means of reaching a market. What has happened on land may not happen on the sea; but, in view of our altered relations, industrial and commercial, to the rest of the world and our proven efficiency in supplying its needs, may it not be found that the sea—so long a barren waste to us—has become at last a fertile field for the same kind of enterprise which has given us an unexcelled system of internal and coastwise transportation?

GENERAL SUMMARY OF TRADE.

When we come to survey the field of international competition, as described by our consuls and in the light of comments by foreign economists and trade authorities, we find some highly significant indications of the probable course of trade currents within the next few years. As to the general march of our commercial expansion in the immediate future, the reports of the consuls emphasize the conclusions to be drawn from the most recent figures of the United States Treasury. According to a statement issued by the Bureau of Statistics of that Department for the decade ended with the calendar year 1900, our imports, which in 1890 were $823,397,726, were in 1900 $829,052,116, an increase of less than 1 per cent in the decade; while our exports, which in 1890 were $857,502,548, were in 1900 $1,478,050,854, an increase of 72.4 per cent. In 1890, the excess of exports over imports was $5,654,390; in 1900, it was $648,998,738.

"In our trade relations with the various parts of the world," continues this statement, "the change is equally striking. From Europe, we have reduced our imports in the decade from $474,000,000 to $439,000,000, while in the same time we have increased our exports from $682,000,000 to $1,111,000,000. From North America, imports fell from $151,000,000 in 1890 to $131,000,000 in 1900, while our exports to North America increased during that time from $95,000,000 to $202,000,000. From South America, the imports increased from $101,000,000 in 1890 to $102,000,000 in 1900, while to South America our exports increased from $35,000,000 to $41,000,000. From Asia, the imports into the United States increased from $69,000,000 in 1890 to $123,000,000 in 1900, while to Asia our exports in the same time increased from $23,000,000 to $61,000,000. From Oceania, the importations in 1890 were $23,000,000 and in 1900 $23,000,000, while to Oceania our exports in 1890 were $17,000,000 and in 1900 $40,000,000. From Africa, importations increased from $3,000,000 in 1890 to $9,000,000 in 1900, and exportations to Africa increased from $4,500,000 in 1890 to $22,000,000 in 1900."

The changes in the movements to and from the continents are attributed by the Bureau of Statistics to two great causes: First, the increase at home of manufactures which were formerly drawn chiefly from abroad; and, second, the diversification of products, by

which markets are made for many articles which formerly were produced or exported in but small quantities. "From Europe, to which we are accustomed to look for manufactures, our imports have fallen over $35,000,000, while Europe has largely increased her consumption of our cotton-seed oil, oleomargarine, paraffin, manufactures of iron and steel, copper, and agricultural machinery, as well as food stuffs and cotton, our exports to that grand division having increased $428,000,000 since 1890. From North America, the imports have fallen $20,000,000, due chiefly to the falling off of sugar production in the West Indies, the imports from Cuba alone having decreased from $54,000,000 in 1890 to $27,000,000 in 1900. To North America, the exports have increased meantime over $100,000,000, the growth being largely manufactures and foodstuffs, a considerable portion of the latter being presumably reexported thence to Europe. From South America, the imports have increased in quantity, especially in coffee and rubber, but decreased proportionately in price, so that the total increase in value in the decade is but $1,000,000, while in exports the increase is $6,500,000, chiefly in manufactures. From Asia, the importations have increased more than $50,000,000, the increase being chiefly in sugar and raw materials required by our manufacturers, such as silk, hemp, jute, and tin; while to Asia the increase in our exports has been nearly $40,000,000, principally in manufactures and raw cotton. From Oceania, the imports show little increase, though this is due in part to the absence of statistics of importation from Hawaii in the last half of the year 1900; while to Oceania, there is an increase in our exports of more than $20,000,000, chiefly in manufactured articles. From Africa, the increase in imports is $6,000,000, principally in manufacturers' materials, of which raw cotton forms the most important item; while our exports to Africa increased meantime $17,000,000, chiefly in manufactures."

The following tables show the imports and exports of the United States by grand divisions in the calendar years 1890 and 1900. In the figures showing the distribution by continents in 1900, the December distribution is estimated, though the grand total of imports and exports for 1900 is based upon the complete figures of the Bureau of Statistics.

Grand divisions.	Exports from United States.		Imports into United States.	
	1890.	1900.	1890.	1900.
Europe	$682,585,856	$1,111,456,000	$474,656,257	$439,500,000
North America	95,517,863	202,486,000	151,490,330	131,200,000
South America	34,722,122	41,384,000	100,959,799	102,000,000
Asia	22,854,028	60,598,000	68,340,309	122,800,000
Oceania	17,375,745	39,956,000	23,781,018	23,400,000
Africa	4,446,934	22,170,000	3,169,086	9,900,000

NEW CURRENTS OF TRADE.

Besides the surprising development of our sales of manufactured goods in the most advanced industrial countries of Europe, which may be said to have introduced an entirely new element into Old World trade, we find other phases of commercial expansion which were quite as unexpected and are likely to profoundly affect our economic, and perhaps our political, future. The rapid growth of cotton manufacturing in our Southern States, for example, could not have been anticipated a few years ago, although it seemed probable to those familiar with the peculiar advantages of the South for engaging in this industry that some day that section would emerge from its position of dependence upon outside markets for the consumption of its cotton and create its own home markets by the erection of mills. Within the years 1889–1899, inclusive, according to Mr. A. B. Shepperson, of New York,* the number of spindles in the South increased 190½ per cent against 11.4 in our Northern States, 4⅓ per cent in Great Britain, 30.6 per cent in continental Europe, 71 per cent in India. "In the percentage of increase of spindles and of consumption of cotton" (206½ per cent in Southern and 29 per cent in Northern mills), says Mr. Shepperson, "the South makes the best showing of the countries compared, while India is a good second."†

There are now nearly 4,000,000 spindles in the South, against 1,360,000 in 1889, and new mills are constantly being built,‡ although the past year has witnessed depression in the industry due to the troubles in China. The entrance of the South into oriental trade is almost as novel a feature of our expansion as any that have been indicated, and it is one that seems likely to have a most important bearing upon our social and political evolution, as well as upon our influence in international trade. The South has suddenly acquired a great stake in the affairs of the Far East, and what this may mean in the adjustment of our relations with other countries having large interests there and in shaping our international policies is a question which only the future can answer. In a memorial from the cotton manufacturers of the South addressed to the Secretary of State in November last, commending the "open-door" policy in China, the

*Cotton Facts, December, 1899.

†Increase of India in number of spindles, 71 per cent; in consumption of cotton, 88½ per cent.

‡"The current year," says Prof. Henry M. Wilson, of Raleigh, N. C., in an article in the Textile Manufacturers' Journal of December 20, 1900, "has witnessed greater strides in cotton manufacturing in the South than last year, when the growth of the industry was considered phenomenal. New spindles and looms have been added, new mills built, and others projected at a rate that causes the careful observer of the South's progress to gaze with amazement upon such activity. Nowhere in the world is the interest being taken in cotton manufacturing as here in the South, where most of the staple is produced. From returns made to the New Orleans Cotto i Exchange, the number of new spindles added this year in old mills, new mills, and in mills under construction is 1,456,897. New looms added to these same mills number 27,613."

statement is made that a large part of the production of the cotton drills and sheetings manufactured in Southern mills is exported to North China, and that "the prohibition or interference in China by any European government would tend to seriously injure, not only the cotton-manufacturing industries, but other important products of the United States which are being shipped to China. For the protection and perpetuity of these commercial relations," it is added, "we earnestly pray that the Administration will take such action as may be proper under existing conditions. It is not only the manufacturers of cotton goods that would be seriously affected, but the Southern planter and cotton grower, who finds a ready cash sale for his products at his very door; and also the thousands of employees and laboring classes who are engaged in the cotton mills and depend on the success of these manufacturing industries for a livelihood."

The developments of the past two years in consequence of our acquisition of the Hawaiian and Philippine islands have brought another factor into prominence in our commercial development, which may be potential of unlooked-for results. The Pacific slope is rapidly being converted from a mere outpost of trade into a great hive of commerce.* Not only San Francisco, but Port Townsend, Seattle, Tacoma, and Portland are becoming entrepôts of oriental and South Pacific commerce, and San Diego seems likely to be an important factor in the development of trade with the west coast of Latin America.

The growth of sea-borne commerce at these points means much for the great extent of country tributary to them and promises to work marked changes in the industrial condition of the vast region west of the Rocky Mountains. In a similar way, our southern group of States may find a sweeping readjustment of their economic relation to the rest of the Union in the fact that Cuba and Porto Rico now offer them easy and convenient stepping stones to Latin American trade.

Even in the now familiar conditions affecting the Atlantic seaboard, which, as we have seen, have recently produced a great increase in our export trade, a new element appears in the statement of our consul in Sierra Leone, Mr. Williams, that, in a few years, West Africa will offer a market for our goods "only second in importance to that of China." East Africa and South Africa have already shown a marked preference for certain lines of American manufactures, but West Africa is for our exporters a new and more accessible market, the possibilities of which have heretofore attracted but little attention.

*Exports from ports on the Pacific coast (excluding Alaska) which amounted to some $36,800,000 in the fiscal year 1895, rose to $75,300,000 in 1898, and, though the total fell to $57,600,000 in 1899, it rose again to $71,600,000 in 1900 (years ended June 30).

DISTRIBUTION OF OUR EXPORTS.

A glance at the accompanying map of the world, showing the distribution of our exports of manufactures, reveals the significant fact that, as yet, the widest range of consumption of our goods is found in the leading industrial countries, such as Great Britain, Germany, France, and their willingness conjoined with their greater capacity to take our products raises the interesting question whether our activity in competing for neutral markets, such as China, Africa, South America, etc., is not, for the present, restrained by the fact that our energies are largely employed in manufacturing for the European demand. The seriousness of our competition in the development of trade in countries which, as yet, are but imperfectly exploited will begin to be fully felt, it would seem, only when the European demand shall have slackened or we shall have more than met its requirements. In that case, our exporters would undoubtedly address themselves more systematically and with greater energy to trade regions which our European rivals are now so industriously seeking to control. There is food for thought also in the possible consequences to our European trade of a rivalry on our part which may be so crushing as to greatly impair the purchasing power of those who are now our best customers. If we permanently cripple their chief industries, we deprive them, to a greater or less extent, of the means of buying from us, and the consumption of our food supplies and our raw materials, as well as of our finished goods, may be greatly curtailed. The solution of the problem may perhaps be found in the gradual specialization of commerce and industry, according to the peculiar capacity of each competing nation—the survival, in other words, of the fittest conditions for this or that country—and the gradual subsidence of competition into healthful exchange.

AMERICAN AND AFRICAN TRADE.

The annual reports of the United States consular officers, as summarized in the Review of the World's Commerce, are supplemented with the latest data obtainable from official and other reliable sources in foreign countries; presenting, substantially, contemporaneous pictures of trade and industrial conditions throughout the world. Taking the great geographical divisions in alphabetical order, we find that Africa is rapidly becoming a promising field for American enterprise wherever artificial restrictions are not imposed. West Africa, as we have seen, has come to the front as a serious quantity. There is, says Consul Williams (Sierra Leone), an increasing demand for American goods, and an agency has been established. In South Africa, the war has, of course, deranged

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trade; but in 1899, the United States exported $10,000,000 worth of goods to Cape Colony and $3,250,000 worth to Natal. A marked advance in imports from the United States is noted in agricultural implements, machinery, and vehicles, besides food supplies, and Consul-General Stowe is sanguine of a great increase of American trade when peace shall have been restored. In East Africa, it is noticeable that in Madagascar, where France imposes a tariff discriminating in favor of her own products, our cotton-goods trade, once considerable, has practically been destroyed, whereas in Zanzibar, the Somali country, and Abyssinia, where such restrictions do not exist, it continues to grow. A British Foreign Office report from the Somali Coast states that the cheaper American gray shirtings are preferred to European cloths and are very popular. They form the ordinary wearing apparel of the inland Somali. The two largest items of trade—the import of gray shirtings and the export of skins—"are entirely in the hands of Americans."

In America, we still control more than half of Canada's trade, though trade with Great Britain is growing because of the preferential tariff of 33⅓ per cent in favor of English goods. With Mexico, our trade relations continue to be most satisfactory. During the fiscal year 1899–1900, we took 77 per cent of Mexico's exports and sold her over half of her imports. Capital from the United States is flowing into the country, and the recent industrial growth has been remarkable. Our goods seem to be making steady progress in Central America—especially in British Honduras, Costa Rica, the Republic of Honduras, and Nicaragua. We have lost ground somewhat in Guatemala, though we sent nearly one-half of her purchases in 1899. Great Britain, upon the other hand, increased her sales by about $134,000. Salvador imports only something over two-thirds as much from the United States as from Great Britain, although we take twice as much of her products. A notable fact about Central America is the increasing investment of German capital in commercial enterprises, especially in Costa Rica, Guatemala, and Nicaragua—which is estimated to amount to some $67,000,000—and the encouragement given to Germans to emigrate to Central American countries.

With the West Indies, especially the British islands, our trade is constantly growing. In Jamaica, we have 64 per cent of the imports, against a little over 33 per cent from Great Britain. Generally speaking, the West Indies may be said to draw the bulk of imported food supplies from us and an increasing proportion of manufactured goods as well. To Haiti, we furnish 66 per cent of the imports, though nine-tenths of the exports are sent to Europe. Our consul at Copenhagen, Mr. Freeman, reports under date of December

20, 1900,* that "seven new steamers have just been ordered for the fruit trade between the West India Islands and the United States." "The contract for one of them—the *Taunton*—with the option of two others," he adds, "was signed to-day between the United States Fruit Company and Messrs. Burmeister & Hains, extensive shipbuilders of Copenhagen. Three of the seven will be built in England, three in Norway, and one in Denmark, with a possibility of two more at Copenhagen. The United States Fruit Company has already over twenty steamers in the banana trade from the West Indies to American ports. These vessels are registered as Norwegian, but it is understood that the bulk of the capital invested is American."

In Cuba and Porto Rico, sufficient time has not yet elapsed for recuperation from the war and the readjustment of industrial and commercial conditions, but in both islands trade is beginning to revive, with the promise of gradual development on lines of closer intimacy with the United States.

In South America, as has been shown, our trade has developed but slowly, except in the Argentine Republic and Peru. In 1899, the imports of Argentina from the United States increased by over $4,000,000. We now stand second in imports, though we still have but little over one-third of Great Britain's share. We exceed Germany by about $2,500,000 and Italy by $1,800,000. The imports from France are comparatively insignificant. As heretofore stated, our commerce with Peru increased from $1,588,000 in 1897 to $3,491,000 in 1899. During the first eleven months of 1900, our exports thither amounted to $1,981,642, against $616,559 for the whole of the calendar year 1893. With Bolivia, our trade is still trifling, the import business being largely in the hands of Germans, owing partly to the cheapness of their goods and partly to German immigration. Brazil sent us $60,000,000 worth of her products in 1899 and took less than $12,000,000. Great Britain, importing but $20,000,000, sold Brazil $27,000,000 worth of goods. Germany sold Brazil about half of what she bought; France, a little less than four-fifths. Belgium, importing a little over $2,000,000, sold more than $10,000,000. The United States ranks only sixth among the nations selling to Brazil, though it buys more of Brazil's staples than all Europe combined. Brazil has been passing recently through a period of commercial depression; but Consul Furniss, of Bahia, reports a better outlook for the new year. Consul Gunsaulus attributes the slow progress of American trade with Brazil in great part to the need of better transportation facilities and to the fact that all railroad and banking institutions, as well as many other large enterprises, are

* See ADVANCE SHEETS No. 941 (January 22, 1901).

controlled by European capital. In Chile, Great Britain still has the largest share of the imports (about $16,000,000 in a total of $39,000,000) and takes more than two-thirds of the exports. Germany comes next in sales to Chile, and the United States third, with $3,000,000, or but little more than three-fourths of Germany's share. In Colombia and Venezuela, trade has suffered recently from political disturbances; in Ecuador, we had about 22 per cent of the exports during the first six months of 1900. In the Guianas, we take nearly as much as England from the British colony, but sell only half as much; and we export but little more than one-fourth of the Dutch colony's purchases, though we buy more than half of its total exports. Holland, upon the other hand, takes only one-third of the exports and has more than half of the import trade. In French Guiana, the imports are almost wholly from the mother country. With Paraguay, our trade is still insignificant; but in Uruguay, Consul Swalm notes a steady expansion of United States trade and increasing popularity of American goods.

The burden of most of the consular reports from South America is the need of better facilities of steamship communication with the United States and of American banking institutions, enabling us to establish closer and more systematic relations. Upon this point, the New York Journal of Commerce said editorially in its issue of January 12, 1901:

> One of the strongest arguments which can be made under present conditions for a more liberal system of credit issues is its effect upon our competition in foreign markets. While the manufacturing producers of the United States contended only for the home market, they were under a common disadvantage, barring differences of locality, in the restrictions imposed upon the issue of instruments of credit. Now that the world has entered into the struggle for the control of colonial markets and the undeveloped countries of the Orient, every factor which contributes to efficiency and economy in the methods of the producers of any nation contributes by just so much towards their ability to compete with foreign rivals. The control which British and German merchants have long retained over trade with South America, in the face of appeals to pan-American patriotism, elaborate conferences, and advice by United States consuls how to win the southern market, has long afforded a striking example of the power which comes from control over the agencies of credit. Foreign banks financed in London have power to use their credit much as they please, to issue circulating notes under local conditions, and to keep only such reserves as sound banking policy suggests. These unfettered powers and the possession of large capital have enabled them to grant long credits, sell exchange upon favorable terms, and to offer accommodations to the international traders which could not be offered by Americans to theirs.

CONDITIONS IN ASIATIC TRADE.

The whole commercial world has watched the progress of events in China during the past year with keen suspense and anxiety as to the possible results in shaping the vast potentialities of Asiatic trade. Prior to the outbreak of the "Boxer" movement, China

seemed to be on the eve of a great industrial awakening. During 1899, her trade increased largely over that of the previous year and more than doubled that of 1890. The feature most worthy of note was the continued advance of American and Japanese goods. A highly encouraging fact was the tendency to purchase a better class of goods. The sales of the United States in 1899 showed an increase of over $4,000,000, the total being about $16,000,000, or $6,000,000 more than the sales of all continental Europe and Asiatic Russia, not taking into account our exports via Japan and Hongkong or the great quantities of merchandise shipped by us to China via London and some sent by way of continental ports which are credited to the countries forwarding them. Great Britain's exports to China still exceeded ours by some $13,000,000, or only about $3,000,000 less than our total; but the relative growth of our trade was much greater, the total increase for Great Britain in 1899 being only a little more than $500,000 in excess of ours, notwithstanding a much larger volume of sales. Up to 1898, kerosene was our leading export to China; but in 1899, the volume of our sales of sheetings (nearly $7,000,000) was not only greater than that of any other item, but exceeded the total value of our entire trade for any year previous to 1896. The value of our sales of cotton goods, not including those sent by way of Japan and Hongkong, was over $10,000,000, or more than half the total of our sales to the whole world. In 1899, according to Chinese returns, we bought more from China than did any other country, exceeding Great Britain by 7,723,168 haikwan taels ($5,564,543).

"In proportion to the volume of its trade," says the New York Journal of Commerce, December 4, 1900, "the United States has probably suffered more seriously than any other nation from the commercial effects of the recent troubles in China. The fact that the area of active disturbance has been confined to the northern provinces will serve to explain this, because it is with these provinces that the largest part of our trade, excepting only in flour, is conducted. The effect on our flour trade of the presence of foreign soldiers in China has been decidedly stimulating, the exports to Hongkong and other ports of China being valued for the ten months ending last October at $4,114,010, against $3,077,473 for the corresponding period of last year. In cotton cloths, the reverse of this process is manifested in a very emphatic way. To appreciate the full significance of this, we must turn to the reports of the Chinese maritime customs, which show the imports from all sources and give the materials for a comparison between our own trade and that of other nations. These are complete up to the week ending October 19 and show that, while the decline in the imports of English gray shirtings has been only from 4,106,293 pieces to 3,986,645 pieces, the

decline in American sheetings has been from 3,060,227 pieces to 2,351,931 pieces. There has been a very slight decline in the imports of English white shirtings, while in American drills the decline has been fully 33 per cent. The figures of the total deliveries show a still greater shrinkage of the trade, the amount in stock of all American fabrics being six times as great at the same date last year. In the receipts of kerosene oil from this country there has been a decline of some 400,000 cases, or about 20 per cent." From these facts, the conclusion is drawn that "it is a matter of the first importance for those American cotton manufacturers in the South who depend almost exclusively on the Chinese demand that normal relations with that Empire should be resumed."

In close association with our interests in North China, the economic future of the contiguous territory controlled by Russia becomes a question of great importance to our manufacturers and exporters. According to an article in the Novoe Vremia, a leading newspaper of St. Petersburg, in its issue of August 13, 1900, the winter of 1899–1900 witnessed an enormous import of American products into the Amur Province—including flour, iron, iron and copper ware, and household utensils. There are said to be good openings for American products, owing to the lack, as yet, of manufactories. Siberian merchants, it is added, are beginning to feel the pressure. Some are demanding the exclusion of American imports, but consumers protest on the ground that no spirit of enterprise exists in Siberia and prices are extremely high. "The chances are," says the Novoe Vremia, "that the Americans will benefit more from the Chinese markets than the Russians." In 1899, United States exports to Asiatic Russia amounted to about $1,860,000 and for eleven months of 1900 to $2,638,640.

Japan, as has been indicated, is one of the gateways for our Chinese trade, and the recent development of Japanese steamship communication with ports on our Pacific coast is due, in part, to the fact that she is a carrier of products not only for her own ports, but for points in China. Until normal trade relations are restored in the Philippines and Manila takes its proper place as an entrepôt of oriental traffic, Japan will doubtless continue to profit by present conditions. Our trade with Japan herself, however, is steadily growing, and in the near future it may afford ample scope of its own for transportation enterprises. Of the total exports of Japan in 1899 ($107,000,000), the United States took nearly $32,000,000. We sold Japan a little over $19,000,000 of her total purchases abroad—nearly $110,000,000. Great Britain exceeded our sales to Japan by some $3,000,000, but purchased only $5,612,000. During the past year, Japan has suffered from trade depression, which is attributed, in part,

to insufficiency of capital for the development of her industrial undertakings. The imports of Japan for the first ten months of 1900 (no later figures being available) amounted to $124,261,250 and the exports to $81,146,759—indicating a notable gain in imports and a decrease in exports. According to United States Treasury returns, our exports to Japan for the same period were nearly $24,000,000 (against $14,400,000 during the same period in 1899), while our imports therefrom were $22,100,000, against $25,700,000 in the ten months of 1899. Consul-General Bellows states that, while labor in Japan is apparently cheap, because low wages are paid, it is in reality much dearer, as measured by results, than in America or Europe, and must remain so until the Japanese adopt the machinery and labor-saving appliances of western nations. Wages, however, have risen in Japan already, as the result of the increase in industrial activity, and it is to be assumed that the scale of living of the Japanese will also rise as wages advance, gradually bringing about much the same conditions as exist in all progressing countries. The fear of Japanese competition, with the imaginary advantage of "cheap" labor, which a few years ago caused some concern in the United States, has been largely dissipated by experience. Japan may be able to compete with us at some points in the future, but her general development seems to mean increased purchasing power and a larger consumption of our goods. It was thought at one time that she would flood our markets with cheap watches and cheap bicycles, but she has found such enterprises unprofitable and buys her watches and bicycles from us.*

Of the other Asiatic markets, it may be noted that we are increasing our sales of iron and steel in British India, and American cigarettes are in demand; that Americans are doing much to develop Korea, and the gold mines operated by an American syndicate are proving successful; and that in Persia and in Asiatic Turkey, American goods are finding their way, in spite of the remoteness of those countries and the lack of facilities of transportation.

GROWING TRADE WITH AUSTRALASIA.

During the past year, the colonies of Australia and Tasmania were combined into a federation, under the British Crown, to be known as the Commonwealth of Australia; New Zealand remaining, as before, a separate dependency. What effect this consolidation will have upon the industrial and commercial destiny of Australasia is as yet, of course, a matter of speculation. According to a report

*In the eleven months ended November, 1900, we exported to Japan $226,035 worth of cycles and parts thereof, against $117,372 worth in the same period of 1899; and $191,394 worth of clocks and watches.

from Consular Agent Harris, of Eibenstock, Germany, exports from the United States to Australasia are steadily on the increase. The building of railways from the coast into the interior, together with improved steamship communications, has been of material benefit to American manufacturers. During the past ten years, our export trade has increased from $13,000,000 to over $26,000,000, or more than 100 per cent. In 1900 (fiscal year), our exports to Australasia amounted to $26,725,702, against $19,777,129 in 1899 and $15,609,863 in 1898. We now stand next to Great Britain, whereas five years ago American and German exports were about the same. To-day, we export to Australasia six times as much as does Germany. American goods, especially shoes, are steadily gaining in popularity throughout Australasia.

THE OUTLOOK FOR BRITISH TRADE.

Of the European countries, Great Britain continued, during the year 1900, to show the largest gains in both import and export trade. Exports from France and Germany increased, but their imports decreased. In all three of these great industrial countries, and also in Belgium, trade suffered from various causes. On the Continent, the depression is ascribed, in part, to the large amounts of capital invested by Belgium, France, and Germany in foreign lands—Russia, Africa, China, etc. "In Great Britain," says the London Times of January 8, 1901, in its annual summary of trade, "the tide of prosperity which commenced to flow in 1896 reached its high-water mark in the past year. The ebb, which was scarcely perceptible when the year turned, became more pronounced towards the closing days of the century. Manufacturers both in the hardware and textile branches of trade were severely penalized by the high level of values which raw products attained and, being less favorably situated than some of their foreign rivals, have felt keenly the effects of such competition. The prolongation of the war has kept the labor market bare, and in some industries the dearth of efficient hands was complained of. Such conditions have naturally led to the payment of higher wages, which tended to increase still further the cost of production; but the lessening volume of trade or the inability to work at a profit without additional relief in the cost of raw material has latterly led occasionally to the adoption of short time or to a reduction in the number of work people employed. The competition most severely felt was that of America and Germany, the commercial agents of which countries have shown extraordinary energy in securing orders. In the first-named country, the trade has obtained additional advantage by the adoption of all the latest labor-saving appliances and the most modern machinery. Consequently, although the rate of pay in the States is much higher than in this country,

such extra cost has been far more than recouped in the much larger amount of work obtained per man."

"We are entering," says the Times editorially, "upon the twentieth century 'upon the down grade,' after a prolonged period of business activity, high wages, high profits, and overflowing revenue. The check may be only a temporary and trifling one, but it may also be the prelude to a commercial and industrial depression of considerable duration." Notwithstanding the fact that a decline in the development of trade marked the last half of the year, the trade returns for Great Britain in 1900 "are by far the largest of any recorded. The total value of the imports increased from £485,000,000 in 1899 to £523,000,000 in 1900; while the total value of the exports of British and Irish produce and of foreign and colonial merchandise showed a similar increase from £329,000,000 in the former year to £354,000,000 in the latter. But this is principally due, both in imports and exports," the Times explains, "to the rise in prices in a few articles, especially coal and coke, raw and manufactured cottons, and some minerals. The imports of raw cotton increased, for instance, less than 64 per cent in quantity, but 106 per cent in value. The imports of copper fell off nearly 34 per cent in quantity, but increased nearly 24 per cent in value. So the exports of coal and coke increased in quantity a little over 3 per cent, but in value over 36 per cent. The exports of cotton yarns and of cotton piece goods declined in quantity over 18 per cent and over 4 per cent, respectively, while the values increased not quite 3 per cent and over 7 per cent. It is not possible, therefore, to accept the trade returns of the volume of the imports and exports, measured by official values, as evidence in any respect at variance with the trustworthy reports from individual centers of trade, including both home and foreign commerce. In fact, the high prices which make those totals look so imposing are among the main causes of the depression that has begun in the greatest branches of industry."

"With respect to foreign competition," adds the Times, "British manufacturers will have to imitate more closely the methods of their American and German rivals. They will have to provide themselves, like the former, with the newest labor-saving appliances and machinery, as well as to study, like the latter, with unwearying and minute attention the needs of the markets of the world."

AMERICAN GOODS IN GREAT BRITAIN.

Our consular officers in Great Britain continue to report the steady progress of American goods in popular favor. Consul McFarland, of Nottingham, under date of December 17, 1900,* notes

* ADVANCE SHEETS No. 932 (January 11, 1901).

the interesting fact that in Leicester, the seat of two great industries—the manufacture of boots and shoes and of hosiery (including underwear)—American foot wear and hosiery are being sold in the retail stores, and much of the machinery now used in the shoe factories is of American make. Other consuls report increases in British imports of American shoes, furniture, agricultural implements, tools, flour, electrical appliances, etc. The demand for American hardware is large and growing, especially for refrigerators, steam valves, radiators, and lawn mowers. Our engineers' machinery and tools are acknowledged to be far ahead of any others and command an ever-increasing sale.

AMERICAN MACHINERY IN FOREIGN FACTORIES.

The introduction of American machinery and tools, indeed, is becoming quite common, both in England and upon the Continent. The results in cheapening and improving factory products find a notable illustration in the manufacture of firearms at Liege, Belgium. According to Consul Winslow, American machinery has worked marked changes there, bringing about a great reduction in cost and turning out better weapons, because the different parts can now be made interchangeable. The ultimate effect of the adoption of our labor-saving appliances and methods will probably be to reduce the present disparity between American and European manufactures resulting from the superiority and greater cheapness of our product; but the process of adaptation in the more conservative industrial centers of the Old World must be slow, and in the meantime our manufacturers will doubtless continue to reap a rich harvest in Europe, as elsewhere. The interesting deduction obviously suggests itself that improved machinery, which was once regarded as the foe of labor—and is still so regarded by some of the labor organizations of Europe—has proved itself to be the most trenchant weapon of American workingmen in the competition for foreign trade.

INDUSTRIAL CONDITIONS IN CONTINENTAL EUROPE.

Taking up the continental countries of Europe in alphabetical order, we find that in Austria-Hungary, during the first few months of 1900, great depression prevailed in all branches of trade. It was caused to a considerable extent by the great coal strike in the spring. Towards midsummer, conditions improved and the Empire began to export more largely. Strong efforts to promote manufactures are being made by the Government.

From Belgium, our consuls report that it is doubtful whether the great industrial development can be maintained at its present point.

Depression is beginning to be felt, and undertakings in foreign lands—Russia, the Kongo, China—have taken a considerable amount of capital out of the country, affecting the value of agricultural properties. In 1900, the United States sent to Belgium increased quantities of barley, wheat flour, fruits, copper and nickel, machinery, dyes and colors, oil cake, drugs, and woods, but fell off in bicycles, grease and salted meats, paper, wheat, and wood pulp.

In France, American goods are very popular, especially harvesters, mowers, and other agricultural machinery and implements; bicycles, boots and shoes, engine and other lubricating oils, cotton-seed oil, oil cakes, etc. Carpet sweepers, meat grinders, and ice-cream freezers are also seen. The consul at Marseilles, Mr. Skinner, notes improvements in the French factories and a tendency on the part of large corporations to absorb smaller ones.

In German industries, says Consul-General Mason, of Berlin, the limit of judicious expansion seems to have been reached, and there is overproduction in some lines, such as cement, iron tubing, and other branches of manufacture, especially iron and steel. Mr. Mason also notes a general stringency caused by the overfinancing of foreign enterprises. "Here, as elsewhere," adds Mr. Mason, "the United States is frankly recognized as Germany's most richly endowed, most aggressive, and most formidable rival. On the other hand, the Empire is, after Great Britain, our best customer, and anything which checks the prosperity of her people will diminish to that extent their ability to maintain the reciprocal trade which is now so heavily in favor of the United States." Germany's advantages over us, in the opinion of Mr. Mason, are higher technical and mercantile education, "cheaper and more tractable labor," and a merchant marine capable of carrying her products to every market on the globe.

In the Netherlands, American tools are in general use. Our steam pumps, wood-working machinery, etc., are gaining a foothold. Stoves made in Germany after American patterns are supplanting ours, because cheaper. Our office furniture, bicycles, and typewriters continue to meet with favor. American showrooms have been opened in Rotterdam.

Russia, as has been shown in previous Reviews, is engaged in great industrial enterprises and is making rapid progress in the development of her natural resources. She seems especially inclined to take American goods and to welcome American capital and enterprise. Her finances are described in a recent report by her financial agent in Washington, Mr. de Routkowsky, to be in a satisfactory condition. The revenues, he states, are not only amply sufficient to meet the annually increasing ordinary expenses of the Government, but give large and yearly increasing surpluses which allow

the Government to make profitable investments in building railroads, harbors, and other public works. Our consul-general at St. Petersburg, Mr. Holloway, calls attention to the fact that, owing to lack of direct communication, many American goods enter Russia via other countries and are not classified as imports from the United States. During the fiscal year ended June 30, 1900, our exports to Russia amounted to $7,438,317, against $5,957,856 in 1895; our imports in 1900 were $7,245,973, against $3,575,388 in 1895.

In Spain, there are signs of industrial development due to the transfer of capital and industry from colonial to home enterprises. From this, it would appear that the loss of her colonial possessions has been economically beneficial to Spain, instead of injurious. Our consuls report that the Kingdom has recently received large amounts of French, Belgian, English, and German capital investing in railways, mining, beet-sugar production, electric plants, and banking. Besides these, it is estimated that 500,000,000 pesetas (about $80,000,000) of Spanish capital formerly invested in the colonies has gone into home industries. Since the Spanish-American war, writes Vice-Consul-General Hanauer, of Frankfort, September 11, 1900, the internal affairs of Spain have greatly improved and a healthful development of her resources has begun. This has especially shown itself in efforts to develop mineral wealth. Foreign capital has embarked largely upon this branch of Spanish industry. Consul-General Lay, of Barcelona, reports, November 22, 1900,* that "since the West Indian colonies were lost, the production of beet sugar in Spain has almost monopolized the attention of Spanish agriculturists. Large capital has been subscribed for the purpose of cultivating beets on an extensive scale and of erecting sugar mills throughout the country." Our consuls in Spain express the opinion that there is a profitable market there for American goods, and a movement has been set on foot at Madrid for the cooperation of American and Spanish capital in the establishment of an exhibition of those of our products which are likely to meet with favor.†

In Sweden and Norway, and also in Switzerland, there is growth in the importation of American manufactures, and the prospect of steady development is reported to be encouraging.

From Turkey, Consul-General Dickinson, of Constantinople, sends the intelligence that, owing to the establishment of a direct line of steamships from New York, there has been a gratifying increase in the amount and variety of American goods at levantine ports, and the exposition and agency at Constantinople for the sale of our products, which was established in 1899, "is already a success

*See ADVANCE SHEETS No. 926 (January 4, 1901).
†See ADVANCE SHEETS No. 779 (July 13, 1900).

and has outgrown the expectations of those who are conducting the business."

COMMERCIAL POSITION OF THE UNITED STATES.

In short, it may be said that nowhere does the United States appear to disadvantage in foreign trade, and, to quote the London Statist of December 29, 1900, "its ability to compete in the foreign markets with the most advanced nations of Europe has been strikingly displayed."

PROGRESS IN CONSULAR WORK.

The progress noted in last year's Review in the work of the consular service in promoting American industries and trade is emphasized by the increased number of letters from leading business firms and trade bodies during 1900 commending the zeal of consular officers and testifying to the practical utility of their efforts, as well as by the continued assertion by expert opinion abroad of the superiority, both in character and promptitude of publication, of the United States CONSULAR REPORTS. Thanks to the general improvement and quickened zeal among consular officers in preparing their annual reports, the Bureau of Foreign Commerce is enabled this year to publish Commercial Relations about a month in advance of the usual time, and thus to practically reach the goal contemplated in the instructions of the Department—the transmission to Congress on or about the 1st of January of "a comprehensive statement of the trade, not only of the United States with the rest of the world, but of the various countries with each other."

FREDERIC EMORY,
Chief,
Bureau of Foreign Commerce.

DEPARTMENT OF STATE,
January 23, 1901.

THE WORLD'S MERCHANT MARINE AND SHIPBUILDING.

The Frankfurter Zeitung of January 8, 1901, contains an article devoted to the merchant marine of the world and to the shipbuilding industry, which presents some interesting observations and data.

Attention is called to the fact that the enormous growth of production has found a mighty ally in the means of transportation, which have kept pace with it.

Without railroads and steamships, the production of cereals in North America and Australia would not have been so widely de-

veloped, as the products could not have been utilized, except by immigration from overpopulated countries; nor would the gigantic metal, textile, and other industries of Germany have attained their present growth.

The expansion of ocean navigation and the resultant lowering of freights is regretted by the German agrarians, as it has cost them the loss of monopoly in the production of articles of food which they formerly enjoyed; at the same time it is the cause of the marvelous growth of German industries, not only for export, but also for home consumption, because the development and improvement of ocean navigation supplied the demand for raw materials at reduced cost.

Ocean freight rates have been lowered on an average of from 50 to 75 per cent. The rates, for instance, were:

From and to England.	1874.		End of 1900.	
From England to—	*s. d.*		*s. d.*	
Buenos Ayres (for coal)	40 0	$9.73	10 0	$2.43
Rio de Janeiro	30 0	6.30	14 0	3.41
Alexandria	18 0	4.38	7 0	1.70
Odessa	17 6	4.26	6 6	1.58
To England from—				
Quebec:				
Lumber	88 0	21.42	19 0	4.62
Boards	105 0	25.55	40 0	9.73
Valparaiso (saltpeter)	55 0	13.38	22 6	5.84
San Francisco (wheat)	57 6	13.99	22 3	5.41
Rangoon (rice)	55 0	13.38	22 6	5.48

At present, rates are somewhat higher than at the close of 1900, but nevertheless much lower than between 1870 and 1880.

These lower rates are mainly due to improvements in shipbuilding. The tonnage is now considerably greater without a proportionate increase in the cost of running. Up to twenty years ago, the men on sailing vessels had to go up the masts to set the sails or to reef; on new ships, this is done automatically, which, while being safer, requires less labor.

The steamers now use triple and quadruple expansion engines, thereby greatly lessening the duration of the voyage; these and improved furnaces save much fuel for the trips, while the less amount of coal required gives more storage for freight. The freight capacity of modern steamers has increased fully one-third, while the expense has been reduced.

The merchant steam marine of the world has grown immensely, as the following figures illustrate:

Year.	Number of vessels.	Registered tons.	
		Gross.	Net.
1874	5,865	5,226,000	3,471,000
1884	8,433	10,209,000	6,675,000
1894	10,744	15,657,000	9,994,000
1896	11,155	17,089,000	10,761,000
1898	11,576	18,887,000	11,687,000
1899	11,756	19,711,000	12,165,000
1900	12,289	21,787,000	13,465,000

The steam fleet, in numbers, has a little more than doubled in twenty-six years; in tonnage, it has quadrupled.

The reverse has been true of sailing vessels. In this case, there is hardly any difference between the gross and net tonnage.

Year.	Number of vessels.	Registered tons.
1874	56,289	14,523,000
1884	44,734	13,000,000
1894	29,333	9,547,000
1896	29,248	9,136,000
1898	28,885	8,693,000
1899	27,867	8,347,000
1900	27,982	8,205,000

In the short space of twenty-six years, the transportation capacity of the world's merchant marine has increased 250 per cent.

The growing importance of the part which Germany takes in this line of trade has often been pointed out. Germany to-day, not only with reference to merchant steamers, but also to the world's merchant fleet, occupies the place next to Great Britain, which is all the more notable as the United States includes in its tonnage the vessels on the Great Lakes.

The relative position of the principal flags in the fall of 1900 was:

Country.	Steamers.	Sailing vessels.	Total.
	Tons.	*Tons.*	*Tons.*
England	11,859,000	2,513,000	14,362,000
Germany	2,169,000	551,000	2,720,000
United States	1,183,000	1,360,000	2,543,000
Norway	769,000	898,000	1,667,000
France	1,060,000	341,000	1,401,000

England owns considerably more than half of all the steamers in the world. In the building of ships, that country makes a still better showing. British shipyards work in a very large measure for foreign countries.

At the end of the third quarter of 1900, there were being constructed:

Country.	Steamers.	Sailing vessels.	Total.
	Tons.	*Tons.*	*Tons.*
Great Britain	1,192,000	12,000	1,204,000
United States	142,000	13,000	153,000
Germany	147,000	5,000	152,000
Italy	103,000	1,000	104,000
France	63,000	55,000	118,000
Holland	26,000	8,000	34,000

In the years 1898 and 1899, Germany held second place in shipbuilding, but, for various reasons, the shipbuilding in 1900 has received such an impetus in the United States that it has placed Germany third.

RICHARD GUENTHER,
Consul-General.

FRANKFORT, *January 10, 1901.*

THE WORLD'S SILK INDUSTRY.

Consul Covert, of Lyons, under date of January 11, 1901, sends the following extracts from an article upon the condition of the silk industry of the world, recently published in a French trade paper:

THE UNITED STATES.

The United States seems disposed to take the lead among the silk producers of the world. During the last three years, the consumption of raw silk in the United States has exceeded that of France. To say the least, the producing power of the United States has equaled that of France since 1897, and American manufacture has a power of expansion that ours does not possess.

Thus, in 1899, nineteen factories were started in the United States for the manufacture of silk by steam and thirteen others for producing ribbons and other silk goods. These factories belong to Americans and to Germans, French, and Swiss who transfer their entire mills to a country to which it is becoming more and more difficult to export the products of labor.

These mills were built outside of Paterson, where, up to the present, the weaving of silk has been concentrated and where manual labor is very high. One mill in North Carolina works 1,200 looms; another in New Jersey counts 700. Many of these looms are worked by electricity.

Notwithstanding this constantly increasing production, there was an increase in the importations of silk in 1899 as compared to those of 1898. The increase in

the imports of silks, velvets, and plushes, the base of which is silk, was 20 per cent. French silks represent 43 per cent of the silk imports into the United States.

SWITZERLAND.

The year 1899 was very favorable for the manufactories of Zurich. There was a heavy demand for taffeta during the entire twelve months, in the manufacture of which Zurich excels.

The exports of silk from Switzerland aggregated $20,000,000 in 1899. These figures convey a tolerably fair, but still an inadequate, idea of the productive power of the Swiss silk makers. Not having a domestic market large enough to consume their production, and being met in foreign countries by protective duties, the Swiss have not hesitated to go into foreign countries and put up their mills. Therefore, Swiss silk mills are found in America, Germany, Italy, and France.

According to statistics of the silk association of Zurich, 7,000 looms in foreign countries belonged to the Swiss in 1897. The number has increased since then.

Great Britain takes 43½ per cent of the total silk exports of Switzerland.

The silk production of Switzerland has increased 26 per cent since 1889.

ENGLAND.

During the year 1899, the imports of silk into England decreased 10 per cent. The falling off in the purchase of French silk was 8,000,000 francs ($1,544,000). Notwithstanding this, England remains the great international silk market, and it is to that country that we must look for a development of our silk trade.

GERMANY.

In 1899, the imports of silk into Germany increased 11 per cent, and her exports remained stationary. The fact that there was a notable augmentation in the purchase of raw silk proves a rapid growth in home consumption. The Chamber of Commerce of Crefeld estimates this increase at 10 per cent.

ITALY.

The figures concerning the growth of this industry in Italy show such progress as to create the opinion that they may be erroneous. The importations increased 7 per cent. The growth in the quantity of exportations was 36 per cent; the growth in the value of exports was 53 per cent. These figures are corroborated by the quantity of raw silk employed in the silk mills of Italy.

AUSTRIA.

The development of this industry in Austria is slow, but it now seems to be the subject of an effort which will have important results in the near future. The Hungarian Government is offering extraordinary inducements for the establishment of silk mills, such as exemption from taxes, free land upon which to build, 15,000 florins and 20,000 florins bonus annually for ten years, according to the number of looms employed.

JAPAN.

The augmentation in the exports of Japanese silks keeps pace with the increase in the use of looms. It has gained fivefold in ten years. The money value of the growth of 1899 over 1898 was 28 per cent. Is this percentage of increase destined to continue?

The wages of labor and the cost of living have risen rapidly since the war with China, and this may soon arrest development.

A GENERAL VIEW.

The report closes:

Of all these statistics, culled from revenue and industrial authorities, the conspicuous fact presented is that the silk industry is growing and extending. More people are wearing silk than ever before. France heads the list of producers, and the United States of America is pressing hard for the first place, aided by the ability of her captains of industry, her workmen, her dyers and finishers. A large portion of this development is due to the fact that our manufacturers are establishing mills in foreign countries.

BRITISH INDUSTRIAL DEPRESSION.

THE METAL TRADES.

Since January 1, 1900, the metal trades in this country have experienced a remarkable decline. To describe the difference in the condition of these trades at the beginning and at the end of last year would be to contrast enormous activity and practical stagnation. The decline was not a feature of the entire year—indeed, prices reached the highest point in April—but chiefly of the last six months, the reaction being specially marked in December. The course of prices is instructive, although it does not tell the whole story. Middlesborough foundry pig iron fell from $16.54 per ton on December 14, 1899, to $13.62 on December 13, 1900; Scotch warrants per ton, from $16.25 to $15.20; hematite warrants, from $17.76 to $16.54; South Staffordshire marked bars, from $48.67 to $42.58; steel rails, from $33.33 to $30.45; steel angles, from $37.72 to $35.28; steel ship plates, from $38.93 to $32.86; tin plates per box, from $3.89 to $3.16. Since the middle of December last, there has been a further depression of prices all around on light orders, although stocks are low in most lines. On January 4, Scotch warrants were $13.50.

American and German competition became sharply manifest early last summer, but not until autumn did the offers of American iron and steel at reduced prices come upon the market with crushing effect. What made the difficulty worse for British producers was that Germany, having bought largely from America in the spring and summer, became alarmed and resold here at reduced figures and also placed finished iron and steel on this market in competition with American manufacturers. The result now seen is a collapse of the metal trades in Scotland and the north of England. In the Motherwell district, the dullness was felt severely in November, when there was a reduction of 5 per cent in iron-workers' wages and hundreds of men were suspended. Some manufacturers in the

Barrow and Middlesborough districts, and also in Sheffield and Manchester, are reported to be restricting their output. In the north of England and in Scotland, about one-third of the furnaces have already been damped down. Two important firms in the iron trade at Birmingham failed last week.

By not a few observers the outlook is regarded as gloomy. The Edinburgh Evening News goes so far as to say editorially:

> The iron and steel trades have gone from us. When the fictitious prosperity caused by the expenditure of our own Government and that of European nations on armaments ceases, half of the men employed in these industries will be turned into the streets. The outlook is appalling. What suffering will have to be endured before the workers realize that there is nothing left for them but emigration. It is useless to pretend that this generation of workmen can ever hope to contend successfully with the Americans under present conditions. What are these conditions? They have cheaper coal and iron ore, improved tools, innumerable labor-saving machines, and, above all, the strenuous efforts of the workmen to increase the output. How is it to be expected that our workmen, trained to regard restriction of output as their sheet anchor, can suddenly be made to understand that it is a fatal heresy, and that their only salvation is an increased output at diminished cost?

In view of the depression of the metal industries, both the daily press and the trade papers are "taking stock" of existing conditions, trying to make clear the causes and the extent of present troubles, and seeking to discover and point out what must be done to bring about a change for the better. It is interesting to see that the press in general blames manufacturers for not adopting labor-saving machinery in all branches of production where it can be introduced, and blames workmen for their undisguised hostility to all labor-saving devices. In this line, the Edinburgh Evening Dispatch says:

> The question of foreign competition in the metal trades is the most serious industrial problem before the country in the new century, and it is so far satisfactory to find that it is engaging much attention. To show how serious it is, we need only quote a few figures. In 1889, the pig-iron production of the United Kingdom amounted to 8,322,524 tons, as against 7,603,642 in the United States. Since that time the States have shot ahead, and in 1899 their production was 13,620,703 tons, against 9,000,000 in the United Kingdom. In steel production the contrast is much greater. In 1890, the United Kingdom produced 3,679,043 tons of steel and the States 4,277,071; in 1899, the respective figures were 5,000,000 and 10,640,000, the States thus producing more than double the quantity produced in the United Kingdom. American exports are increasing at an even greater ratio. In 1890, the States exported iron and steel to the value of $25,542,000; last year the value was $105,690,000.* Their exports to Great Britain now include pig iron, steel billets, steel rails, steel plates, structural steel, wire rods, wire nails, cast-iron pipes, besides machines of all kinds. In face of facts like these, it will no longer be possible for English engineers to continue the old method of "one man one machine," unless, indeed, they are willing to acquiesce in the gradual extinction of their industry.

*NOTE BY THE BUREAU OF FOREIGN COMMERCE.—In the fiscal year ended June 30, 1900, our exports of iron and steel were valued at $121,858,344.

A "Traveled Scot" has contributed to the Edinburgh Evening News an article in which he makes it appear that there is only one solution of the grave problem before certain branches of manufacture in this country, and that is "removal." He says:

At present, the American iron and steel makers are able to compete with the European manufacturers, not only in South America, Africa, India, Australia, China, and Japan, but they are able to take contracts in Great Britain at prices considerably lower than those quoted by British producers. This competition is comparatively new, and some writers seem to think that it is not serious. There seemed to be ground for their belief—at least their argument was plausible—when America was passing through the recent great trade depression, and when the home demand had fallen to small dimensions. Those holding such a comfortable view must be awakening from their dream of security now that the United States is in a most prosperous condition, with a larger home demand than ever, and yet competes more keenly than ever for the contract of the foreign iron and steel trade.

The question naturally arises, What will the result be? Steel rails are a finished article, but steel billets, angles, and plates are the raw material for many manufactures. Will British manufacturers continue long to handicap their business with the freight, insurance, and transfer charges on their raw material, when they can economize by moving their field of operations to their source of supply? The question of labor is comparatively a small matter, for it is well known that the tendency of labor is to move to where raw material and facilities for its exploitation exist. It appears reasonable to think that the British manufacturer and shipbuilder has before him competition in which he will be handicapped by freight and other charges, and he will have to consider whether he can stand it, or whether he should "take time by the forelock" and get into a new field before it is well occupied by competitors. If reports in newspapers are true, some British manufacturers have already taken this view of the situation, and are making preparations for a change that bodes no good to Great Britain.

TECHNICAL EDUCATION.

Another engineering deficiency, according to most writers, is the lack of practical instruction in the industrial arts. It is the accepted opinion here that in the matter of technical education Great Britain is far behind the United States and Germany. On this subject, a correspondent of the Glasgow Herald gives the Scottish public the following information:

Again, the relation of the man to the master is important. In America it is one of mutual advantage. If a man has shown that he can learn well and work well, he gets every encouragement; he is not as a rule bound down to a fixed wage that any average workman can easily earn, but is paid for what he can do, and facilities are given him to gain further experience. The expense of his technical education is often borne by his employer. The success of this process of mutual advantage is one of the chief reasons why America is the home of invention and typical land of progress. The leading engineering firms always train their men with the utmost care. They require, first of all, that the would-be apprentice shall be not less than eighteen years of age, and that he shall produce evidence of having had a sound general education, and thereafter they undertake to teach him the whole science of his chosen craft, at machine, at bench, and in every variety of tool work throughout all the different shops.

No effort seems to be spared to make the conditions of the work acceptable to the workmen. Men and youths are specially told off to carry machine parts from one place to another, and there are laborers who are constantly engaged in keeping the shops clean and free from litter. Labor-saving machinery and automatic machinery are everywhere in evidence, and the general use of these, more especially of automatic machines, is of very great importance. So long as engineers in Great Britain are under the necessity of working one man one machine they have no chance against their American brethren. At the works of the Sturtevant Engineering Company, for example, one man works six lathes, and at the works of the Yost Typewriter Machine Company one man superintends eight automatic machines. At the works of Pratt & Whitney, at Hartford, a man may be seen working at one time a planing machine, a drilling machine, and a shaping machine; another man minding two cutting-off machines; another working five special lathes fitted with stop; and men will willingly work ten turret-head automatic machines at one time. At the Hartford Screw Nail Works, one man will superintend as many as eighteen machines.

There is yet another reason why the Americans are at present ahead of us. The educational institutions in America are of two kinds: First, there are the large schools, colleges, and universities, like our own, to which the youth goes before entering on his life's work; and, second, there are schools and colleges at which the ordinary workman may study all the arts and sciences bearing on his particular craft, often without paying any fee. In the State of Minnesota, for example, the whole course of education from school to university is free to all. There are throughout the country so many institutions founded by "captains of industry" for the advancement of technology that almost every workman can find close at hand some such place where he receives all necessary aid for his advancement in the technical knowledge required for his special work.

The liberality of rich American citizens in the foundation and endowment of such institutions is a potent factor in the educational development of the nation, and even the most progressive of European countries can not show such rich provision for the advancement of learning, especially in its application to the industrial arts. Nor is this generosity merely posthumous; it is often accompanied by a living personal interest and control. As examples of it we may particularly mention the Pratt Institute, Brooklyn; the Drexel Institute, Philadelphia; the Armour and Lewis institutes, Chicago; Webb's Academy for Shipbuilders, New York; the splendid buildings and equipment of the mechanical, physical, and chemical departments of the McGill University, Montreal; the Leland Stanford Junior University, California; and the new University of Chicago. The total value of the property held by such colleges and universities amounts to the enormous sum of £57,727,434, and their total income is nearly £5,000,000.

THE COAL QUESTION.

Whatever the British manufacturer may think about the various difficulties which expert economic writers find confronting him at this time, I am of opinion that the fuel question disturbs him more than anything else. He may not give due weight to the technical advice and notes of warning which come from his able instructors in the public press, but he can not shut his eyes to the meaning of $3.50 coal. For a year or more, the item of fuel has been a heavy burden to iron and steel makers and to all other manufacturers. They might suffer their recent and present embarrassments with

equanimity, if the future offered a better prospect. Coal has fallen somewhat and may fall somewhat more. But will it ever be cheap again? This, I take it, is the gravest question before the majority of British manufacturers. All coal deposits in Great Britain are known, and there are few fields that have not been worked for a long period. Prominent mining engineers predict that the workable seams of coal in Scotland will be practically exhausted in twenty-five years and that the best of the coal in several English counties will not last longer than 1930. For ten or fifteen years, production has been increasing at a rapid rate. In 1900, the output in Great Britain was considerably more than 200,000,000 tons, of which nearly one-fourth was exported.

Three years ago the president of the Institute of Mining Engineers, at the annual meeting in London, strongly advocated an export duty of 12 cents per ton on coal. Nothing came of this proposition. It apparently awakened no interest among manufacturers. The high prices of coal that have prevailed during the past eighteen months have served to attract earnest attention to the fuel question, which has long been discussed by mining engineers. An indication that the subject has at last excited lively concern outside of the circle of mining experts is found in the action recently taken by the council of the South of Scotland Chamber of Commerce. At the half-yearly meeting of the council, in Galashiels, December 24, resolutions to be submitted by members of the chamber for discussion at the annual meeting of the Associated Chambers of Commerce in London, in March next, were considered. Among the resolutions proposed and adopted was the following:

Resolved, That as the future of Great Britain lies in the power of its manufacture, it is expedient that the question of the continued exportation of coal should be considered and a decision arrived at.

In the remarks which were offered before the vote of approval, the opinion was expressed that this country "was making a great mistake in exporting so much coal." One member, Mr. C. J. Wilson, the mover of the resolution, said that "before many years the price of coal will be very much higher."

RUFUS FLEMING,
Consul.

EDINBURGH, *January 10, 1901.*

AUSTRIAN INDUSTRIAL-ART EXHIBITIONS.

For the purpose of checking the retrogression of business in Austria and improving, as far as possible, the condition of trade and commerce, important action was recently taken by a number of leading Vienna manufacturers and merchants, resulting, first, in a resolution to arrange temporary exhibitions, particularly of industrial-art manufactures, in all the leading markets of the world; and, second, the formation of a society for the furtherance of commerce between Austria and Russia bearing the name of "Oesterreich-Russischer Handelsverein."

Austrian industrial art has its special home in Vienna, and here the stagnation of the past two years has been particularly apparent. Viennese manufactures have lost important markets in England and Germany. These countries not only no longer import wares from Vienna, but export similar articles to Austria in considerable quantities. The recent holidays have made this fact noticeable.

A committee made up of the representatives of local manufacturers has presented a memorandum to the Government in which these evils are enumerated and adequate remedies proposed. The opening of foreign markets is designated as the most important means of furthering the object in view. It is hoped that the exhibition of Austrian manufactures in various foreign countries will draw attention to the superiority of Viennese art goods. This is a plan already well thought out, as shown by the list of cities where these exhibitions will be held, and which is as follows: New York, Washington, St. Louis, Habana, London, Liverpool, Edinburgh, Madrid, Seville, Lisbon, Stockholm, Zurich, Berne, St. Petersburg, Warsaw, Moscow, Riga, Constantinople, Bucharest, Sophia, Athens, Teheran, Tokyo, Bombay, Alexandria, Cairo, Pretoria, Rio de Janeiro, City of Mexico, Buenos Ayres, Melbourne, and Sydney.

The Government is requested in this memorandum to appoint a permanent commission to be intrusted with the preparation of these exhibitions, which commission shall be composed of from twenty-five to thirty members, among them a delegate from the Government, one from the Imperial Royal Austrian Museum of Art and Industry, the Confederation of Austrian Manufacturers, the Export Association, and a representative from each of the industrial-art branches concerned. All offices in this commission shall be honorary and without pecuniary compensation, only such cash outlays as are made in travels for purposes of study being reimbursed. For the execution of this undertaking, the Government is requested to furnish a capital of 2,000,000 crowns (about $400,000), which shall remain intact, only the interest derived therefrom to be devoted to

exhibition purposes. Finally, the Government shall charge its diplomatic representatives abroad to assist the work by giving information and advice.

This memorandum was presented by a deputation of manufacturers to the Prime Minister and by him referred approved to the Minister of Commerce, who gave the deputation the assurance of his warmest sympathies. The Minister of Commerce placed a considerable subvention at the disposal of the manufacturers for the first exhibition, for which London is chosen, as being the largest market and one in which all articles can be entered free. After this favorable result, a member of the preparatory committee repaired to London to look over the ground and returned with excellent reports. At a subsequent meeting, it was decided to hold an Austrian industrial-art exhibition in London in 1902, probably in either Grafton Hall or the New Gallery in that city.

The second measure alluded to, the newly created Austro-Russian Commercial Association, has for its aim the opening of Russia to Austrian art manufactures, a field but sparsely cultivated by Austria hitherto. The society proposes to effect this object by systematically promoting traffic between Russia and Austria and spreading Austrian manufactures and inventions in Russia.

CARL BAILEY HURST,
VIENNA, *January 2, 1901.* *Consul-General.*

BOOT AND SHOE TRADE IN HUNGARY.

In reply to a petition from the smaller shoe manufacturers of Hungary, praying that the subsidized shoe factory lately established in the city of Temesvar be not allowed to make retail sales nor open small warehouses, the Minister of Commerce sets forth the following argument:

The jealousy of smaller manufacturers against the new industries established on a large scale is completely without foundation. The State proposes to subsidize, now as before, the "associations" of small manufacturers.

According to official statistics, there were 30,608 independent shoe manufacturers, with 27,827 laborers and apprentices, in Hungary in the year 1890—*i. e.*, the industry even then was declining, 19,916 of the manufacturers working without help. Inasmuch as Hungary's import of $3,279,600 worth of shoes in 1895 increased to $3,957,400 worth in 1899 and the export from Hungary remained stationary at an unimportant figure, the minister finds it impossible to give further help to the small manufacturers than a certain stability of credit organization, a certain amount of technical help with tools, etc., and various stipends to the more skilled laborers attaining distinction in special lines.

The choice for Hungary now is either to spend millions of crowns in importing ready-made shoes or to erect large shoe factories with State help as soon as possible. The minister decides upon the latter course as the better for Hungary. If

Hungarian capitalists will not, however, put money at present in such shoe factories as will supply the home needs, let them immediately form as many associations for production as possible; in which case, however, let them see that they at the same time lose their individuality and independence of action.

It follows, from the above, that United States exporters still have many years in which to sell Hungary shoes before the latter will be able to supply her own wants. There are many retailers of foreign-made shoes in Budapest, but they are all offering ugly-formed, ill-sized, and fairly expensive goods to the inexperienced buyers who venture to leave their old custom makers for shop goods. The leading American houses will act wisely if they open their own stores in the European capitals, each under the management of a native American who speaks the language of the country and is not too proud to try personally to please his customers. Shoes ought also to have popular names; here, as in America, they have either general or their makers' names. Americans in Europe always look for hats with names known for reliability of fashion and quality. Europeans are also getting into this habit, and shoe exporters are advised to look to the names of their wares.

FRANK DYER CHESTER,
BUDAPEST, *January 10, 1901.* *Consul.*

BOOT AND SHOE INDUSTRY IN SPAIN.

Among the Spanish industries that have been affected by the result of the war with the United States, and the consequent loss of the protected markets in the colonies, few will suffer more than the boot and shoe trade. Statistics show that since peace was effected, Spain has shipped considerable quantities of foot wear both to Cuba and the Philippines, but United States manufacturers have already obtained a footing in these islands; and it is with a view to aiding them in their efforts to develop this trade that I have thought a brief statement of the present condition of this industry in Spain might serve to indicate how competition may be met.

EXPORTS.

The exports of boots and shoes from this country during the past three years and the first half of 1900 are as follows:

Year.	Quantity.	Value.
	Tons.	
1897	1,162	$3,322,697
1898	560	1,281,001
1899	960	2,196,997
1900 (first half)	567	1,298,061

The statistics published by the War Department at Washington are clearer and tabulated in such a way as to show the countries from which the imports are received. Thus, according to the returns furnished up to the month of March, 1900, the United States had shipped to Cuba during the nine months ended March 31, 1900, 431,112 pairs of shoes and sandals, valued at $376,004, while during the same period Spain had sent 2,731,107 pairs, valued at $1,355,826.

Under the heading of boots, the United States sent to Cuba 337 pairs, valued at $731, and Spain 13,689 pairs, of a declared value of $7,491.

These figures show that it is in the better qualities that the United States manufacturers have begun to make their competition felt in Cuba, the average value of their boots being $2.16 per pair, as compared with 54.6 cents, the average price per pair sent from Spain; while the average value of the shoes per pair is 87.2 and 49.6 cents, respectively.

Turning to the imports into the Philippines, we find that during the same nine months Spain sent 3,631 pairs of boots, valued at $7,529, an average of $2.08 per pair, as against 995 pairs, valued at an average of $3.49 a pair, sent from the United States. Spain also sent 34,402 pairs of shoes and sandals, as compared with 743 pairs received from the United States.

The export trade may be said to be confined to Barcelona and the Balearic Islands; for, although there are numerous boot and shoe factories in many of the large towns in Spain, their efforts are confined to supplying the home market, and so far they have made but little attempt to compete abroad. The accompanying report from the United States consul in Malaga well describes the present conditions prevailing, not only in his consular district, but in most other towns in Spain.

The foot wear principally exported to Cuba, Porto Rico, and the Philippines is ladies' and children's light shoes, the inner soles often being made of pasteboard. The average price of the women's shoes is from $3.60 to $4.30 per dozen pairs, less 10 per cent discount, goods delivered at Tarragona.

For exportation, shoes are usually packed in pairs in small cardboard boxes, about 10 dozen of which are placed in a large wooden case. This packing costs from $3 to $6, according to the size of the case and the style of cardboard box.

The freight on shoes from Barcelona to ports in Cuba or Porto Rico is $6 per cubic meter (35⅓ cubic feet), plus 10 per cent primage. To Manila the rate is $7.50, plus 10 per cent primage.

The principal foreign markets at present for Spanish boots and

shoes are the late colonies, but exports are also made to eastern Europe, to Morocco and Tunis, and to Central America.

MANUFACTURE, WAGES, ETC.

Within the last few years, the fashion for wearing canvas shoes has influenced, to a considerable extent, the sale of the prepared leather for the "uppers" of cheap summer foot wear. The climate of Spain in the summer months greatly favors the wearing of these light canvas shoes, which are elegantly made in white or brown and sold at any price from $1 to $3 a pair. The soles are of leather and usually the uppers are ornamented and strengthened by leather tips and cross-bands.

Thirty years ago, leather boots and shoes were never worn by the laboring classes. Sandals made of coarse canvas, with hemp soles, were universally worn, and are so even to-day in the country districts; in the towns, however, they have been replaced by cheap leather boots and shoes. In Barcelona and the surrounding district, there are about 20 boot and shoe factories—12 being located in the city itself—employing about 2,000 men and 500 women and turning out large quantities of machine-made goods.

The boots and shoes manufactured for export are divided into three classes: (1) those made with leather soles and uppers of glazed leather, calf, or kid, but not of sheepskin; (2) those made of sheepskins and half-cardboard inner soles; (3) shoes of sheepskins and all-cardboard inner soles.

The wages paid are as follows: For putting together men's boots and nailing on the soles, 75 to 90 cents a dozen, according to the kind of leather, the workman supplying the nails; ladies' boots, 60 to 70 cents; children's, from 45 to 53 cents a dozen.

The wages paid to the women who sew the uppers together on sewing machines are: Men's boots, 75 to 90 cents per dozen, according to kind; ladies' boots, 53 to 60 cents per dozen, according to kind; children's boots, 30 to 45 cents per dozen, according to kind. The women pay for the silk and sewing thread, and most of the work is done at home.

The cutters and finishers in the factories, however, earn a fixed weekly wage, varying between $2.60 and $3.60.

The working-day is of ten hours, or sixty hours a week.

A small, illy organized trade union exists, but only a minority of the operatives belong to it.

In Valencia, a serious strike in the shoe trade has been going on for some time, the working people demanding increased wages, which the employers say they are unable to grant in the present state of the trade. The strikers have had several meetings and are

endeavoring to start a factory themselves on cooperative lines. It is not thought, however, that the scheme is feasible, owing to lack of funds or the necessary credit.

In Barcelona, numerous shops exist where hand-sewed boots and shoes are made to order and sold. For the equivalent of $5 or $6, a first-class shoe can be bought, comparing favorably both in shape and quality of material with the best that can be produced in other countries. The fine tanned leather for the uppers of the better styles of boots and shoes is all imported from abroad.

In the Balearic Islands, the majority of the inhabitants are said to be connected either directly or indirectly with the shoe trade. Little machinery is used, and the work is mostly done by hand, often in the cottages and dwelling houses of the working people.

There are about 5,000 men engaged in this industry in Majorca in connection with the twenty factories on the island, but there are many more who work at home on their own account, or for merchants and shippers who collect the boots for export. The daily earnings average about 53 cents. In order that our manufacturers may know the style and wholesale prices of the boots and shoes with which they must compete, I have sent to the Philadelphia Commercial Museum ten pairs of shoes and sandals, representing the principal grades shipped from Spain to Cuba.

PENITENTIARY-MADE BOOTS AND SHOES.

At Tarragona, the convicts in the penitentiary are engaged in making shoes, and practically the entire manufacture in that neighborhood is in their hands. The daily wage given them is from 12 to 15 cents, but the overlookers receive certain bounties and gratuities besides. The wages of free journeymen range from $2.15 to $2.60 per week. Shoes for the local trade are made principally by free labor; but the majority are turned out by the workshops in the penal establishment, and these are destined for shipment from either Barcelona or Valencia. Convict labor is so cheap that the use of machinery is almost entirely dispensed with, except for nailing on the heels. There are only two wholesale export shoemakers in Tarragona, and their work is almost entirely done by the convicts, who work from sunrise to sunset, with intervals for meals.

The following particulars are given regarding the materials used in Spain in the manufacture of cheap boots for export. Leather, in its relation to the shoe trade, must be divided into two distinct classes, viz, sole leather and the lighter leather for uppers.

SOLE LEATHER.

Sole leather is obtained chiefly from South America, the weight of the hides, both dry and dry salted, varying from 17 to 28 pounds. Hides are also imported from the Canary Islands, while the slaugh-

terhouses of Spain are a source of further supply, Barcelona and Madrid furnishing the best quality.

Of the South American hides, the "Cordovas" are considered the best, and then come the "Entre Rios," the "Buenos Ayres," the "Paraguays," etc. To a lesser extent, dry, poisoned hides from China, British India, and Morocco, the larger sized Calcutta hides, and many other kinds, mostly cowhides, averaging between 9 and 22 pounds, are also used. These hides form the raw material for sole leather, of which two kinds are produced; the one tanned with pine bark is of a reddish color and is the cheaper and the other, tanned with native-oak bark, is whiter and somewhat dearer.

All sole leather used in the making of boots and shoes, whether for export or for the home trade, is tanned in Spain. Before being flayed, the hides are halved from neck to tail, and being, of course, irregular in thickness and weight, out of every parcel tanned heavy and light pelts are assorted.

In the shoes for export to Cuba, the sole leather generally used is oak tanned, weighing from 6½ to 11 pounds per half hide, while for the home trade it is customary to use pine-tanned leather, weighing from 11 to 17½ pounds per side. Oak tan is, of course, also employed and in different weights.

The cost of tanning sole leather from the hair to the curried state is from 4 to 4¼ cents per pound of raw hide, when tanned with pine bark, or 4¼ to 5 cents when oak tanned. The better qualities of hides and those of light and medium weight are, as a rule, tanned with oak bark.

The price of sole leather fluctuates with the cost of the hides, which, as is known, has recently varied considerably; and it is difficult to give exact information in this respect. I may state, however, that at present good oak sole leather is selling here at about 27 cents per pound, and good pine tan at about 24 cents.

LEATHER FOR UPPERS.

This branch of the leather trade is extremely variable; it follows the whims of fashion and is constantly changing. Nearly all the leather used for uppers in shoes manufactured for export to Cuba is foreign made, chiefly French calf, German glazed kid, and calf and goat skins from Belgium, France, and Germany; dull French calf and chrome-tanned goat skins from the United States. All of these are in black. In colors, United States goat and veal skins, German colored calfskins, and Spanish colored sheepskins are used. Spanish glazed sheepskins, both black and colored, and canvas, satin, and glazed cloth are also utilized in shoes shipped to the Cuban market.

For slippers, slinks are frequently used. After preparing the flesh side of the skin, the hair is left on and forms the outside of the slipper. For the home boot trade, besides the above-mentioned varieties, black or colored or tan Calcutta kips are used. These, to some slight extent, are also exported as leather.

Although all the classes of upper leather mentioned are prepared to a greater or less extent in Spain, the only line that has acquired any importance as an industry is the tanning of black Calcutta kips and of sheepskins in black color and glazed; the other kinds of leather are either defective in quality or are unable to compete in price with similar kinds imported from abroad.

The raw hides, or what are described as calfskins, are imported from central and northern Europe, and the goatskins from India and the north of Africa. Sheepskins are procured from various districts in Spain. Hides and skins are also imported from many other countries, but principally from those mentioned.

It is very difficult to even give an approximate idea of the cost of tanning light hides. In the case of some of them—as, for instance, the sheepskins—the waste is nearly as valuable as the skin, owing to the wool, which often regulates the price of the skin. However, I find that the cost of the whole process of tanning and currying is calculated to be from $2.15 to $2.60 per dozen in the case of entire skins (not sides) weighing 6½ to 11 pounds per dozen. When the weight is 13 to 22 pounds, the cost is from $2.60 to $3.60, and when 22 to 44 pounds the dozen $3.60 to $6. Of course, the materials used influence the cost of production to a certain extent. These materials—such as sumac, roldó, pine bark, and oak bark—are all native products. They fluctuate enormously in price. Sumac, for instance, has risen from $1.15 per Catalan cwt. of 91½ pounds to $2.15; oak bark, from 75 cents to $1.07; pine bark, from 34 cents to 57 cents; roldó, from 52 cents to $1.35.

The following is the present price list of the leading tanner of Calcutta kips in this market:

		Cents.
Sides:		
First quality, black—		
13 to 17½ pounds	per pound	65
17½ to 22 pounds	do	55½
22 to 26½ pounds	do	53½
26½ to 31 pounds	do	50½
Second quality, 22 to 24 pounds	do	48½
Whole hides:		
First quality, black—		
17½ to 22 pounds	do	72
22 to 28½ pounds	do	65½
28½ to 33 pounds	do	64½
33 to 39½ pounds	do	60

Whole hides—Continued.

Second quality—		Cents.
17½ to 22 pounds	per pound...	64½
22 to 31 pounds	do.....	58
31 to 37 pounds	do.....	55

IMPORTS FROM THE UNITED STATES.

The principal article of import into Spain from the United States under the head of dressed leather is glazed kid, which again is subdivided into black and colored.

Of black glazed kid, between 6,000 and 8,000 dozens are annually imported from the United States at prices ranging from 12 to 18 cents per square foot.

Of colored glazed kid, between 500 and 1,000 dozens are bought at from 24 to 30 cents per square foot.

The trade in these goods would be greatly increased in favor of our manufacturers if the existing discriminating duties in Spain were removed and our imports were assessed at the same rate as those of Germany, which at present pay 1.25 pesetas* per kilogram (2.2046 pounds), as against 1.60 pesetas per kilogram on our goods of this class, besides the heavier freight.

I am informed that already two German firms are manufacturing glazed kid and are underselling our manufacturers in this market. The large, cheap skins are those suitable for the Spanish trade, and consequently the difference in the tariff now made of 35 centavos per kilogram represents a considerable increase in the cost of each skin.

Tanned calfskins are principally imported from the United States as colored Russian calf, which is classified as real calf and veal and sides.

The consumption of calfskins received directly and indirectly from the United States may be roughly estimated at about $500,000 worth per annum.

Present prices current for leather used in the manufacture of shoes.

Sole leather, according to quality (the highest price is for oak-tanned leather)	per pound...	$0. 23 to	$0. 28
Black Calcutta calf:			
In sides	do.....	.46 to	.60
Entire skin	do.....	.60 to	.78
Sheepskins:			
Oak tan	do.....		.28
Colored	per dozen...	4. 30 to	6.45
Black	per pound...		.32
Black kid	do.....	.78 to	.92

JULIUS G. LAY,
Consul-General.

BARCELONA, *January 16, 1901.*

* The nominal value of the peseta is 19.3 cents; market value, about 15 cents.

SHOE TRADE IN MALAGA.

Shoemaking is a considerable industry of Malaga, in a local way. The shoes are not exported, even to the colonies. They are sold principally at retail in the city of Malaga and in the villages of the province; nor is there in the city of Malaga or the entire district any fabrication of shoes by machinery. The work is done entirely by hand, except that sewing machines are used in some instances for sewing and embroidering the uppers. These machines are invariably of American manufacture, the "Singer" being most in evidence. In the city of Malaga, with its population of 130,000, there are estimated to be from 1,200 to 1,400 workmen engaged in shoemaking; a number of manufactories employ each 15 or 18 hands. They fill orders even for single pairs—many, indeed, depending more upon individual clients than upon the retail shoe merchants who buy by the dozen or gross. About half of the workmen are employed by the day at the so-called factories; the others work at home by the piece. Those employed at the shops are paid from 30 cents to $1 for ten hours' work a day. The piece workers earn proportionately about the same wages, but do not work as hard.

STOCK SHOES.

The shoes made for stock in Malaga are mostly what are known in the United States as "tan shoes" and, in so far as my observation goes, they look more like American shoes in form and finish than any I have seen on the continent of Europe. They are elegant and graceful in form and have none of the heavy, clumsy, and ill-shapen look of the average foreign shoe. They are made principally out of a leather tanned in Malaga, and retail prices in the shops range from $1.25 to $2 a pair. It is roughly estimated that the cost of manufacturing these shoes is from $7 to $12 the dozen. Shoes of a higher quality are made; but when the retail price is more than $2.50, the leather used is generally imported, coming principally from France and Germany, with a certain proportion from England and the United States. These shoes retail at from $2.50 to $3.50 a pair. When made to order, the price is from $4 to $5. The average price paid for shoes in Malaga is $2.50 a pair; but this does not refer to the low-cut canvas shoes with hemp and rope soles which constitute the only foot wear of day laborers and the peasant classes. The most fashionable shoe dealer in Malaga takes the measures of his clients at a fine shop in the Calle del Marquez de Larios and sends to his workshop in Sevelle to have the shoes made. From Seville, indeed, come many dainty novelties in ladies' shoes and slippers, as

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Malaga custom-house class leather, skins, hides, etc., all under the same heading, and there is nothing to show positively what proportion of the total is shoe leather and what proportion hides.

The following table shows the imports from various countries for the fiscal year ended June 30, 1900, of leather, hides, skins, etc.:

Country.	Quantity.	Country.	Quantity.
	Kilograms.		*Kilograms.*
England	38,670	Denmark	2,711
France	121,516	Morocco	312,800
Germany	12,862	Russia	1,274
Belgium	6,372	Portugal	5,236
United States	13,828	Austria	260
Holland	4,937	Total	*520,680
Norway	214		

*1,147,891 pounds.

It is not likely that many green or cured hides were imported into the Malaga district from the United States or from any European country, unless from France, and it is presumed by those in a position to know that the figures for those countries have reference almost exclusively to leather. On the other hand, it is known that there was no importation of leather from Morocco, and the 312,800 kilograms of imports entered from that country might have been scheduled as hides—calf hides of inferior quality, weighing on an average 13 pounds and costing in Malaga 11 cents a pound. The best of the Morocco hides are sent to France, Germany, and England. It is only the third quality that comes to Malaga; yet the tanners here claim that they manage to make pretty good leather out of them. It is likely that there were a few goatskins among the hides imported from Morocco, also of an inferior quality, as nearly all the good ones go to the United States. It should be noted that all the 312,800 kilograms of African hides entering Spain through the Malaga custom-house were by no means used in Malaga; at least 40 per cent went to Granada and other places in Spain.

LEATHER.

Leather for shoes is imported from France, Belgium, England, Germany, and the United States. The greatest amount comes from France. It is almost invariably calfskin and is of all varieties. The quality in general is fairly first class or a good second class, and the skins or pieces cost in Malaga, freight and duty paid, from $2.35 to $3.75 a skin or piece. The price of a pair of shoes made to order of good French calf is from $3.50 to $5.

The English and American leather entered at the port of Malaga is probably consumed largely in Madrid and elsewhere in central Spain, as the shoemakers here employ very little of it.

No sole leather is imported for use in Malaga, as the tanneries here and those of Galicia and Catalonia supply almost the entire local demand. For the highest class, sole leather from Barcelona and central Spain is used. The six tanneries of Malaga are all very small affairs, and none of them works with much regularity. The biggest has occasionally tanned as much as 35,000 kilograms of hides in a year, but this is above the average.

OPENING FOR AMERICAN LEATHER.

A dealer here admitted to me that American leather was infinitely better than either the French or German product of similar quality, and expressed the belief that intelligent salesmen speaking the Spanish language could find a market for it, not only here, but in other parts of Spain.

Shoemakers in Andalusia, he declared, knew almost nothing of American leather, and he himself found it difficult to believe at first that leather could be made in the United States superior in quality and finish to the best French article, which in Malaga is considered the ne plus ultra of the product. The dealer in question asked me to put him in communication with some United States leather-exporting houses.

In this connection, I suggest that American exporters in quoting prices to Spaniards should quote them per kilogram, instead of per foot, as the latter method seems to be very perplexing to the Malaga shoemakers.

SHOE DEALERS IN MALAGA.

The following firms are the principal shoe-leather dealers in Malaga. All of them import more or less leather from France and Germany.

José Cruset, Calle Moreno Monroy.
Evaristo Minguel, Calle Corneceria.
José Tió, Calle Coldereria.
Serafin Martin, Calle de Martinez.
Manuel Fernandez, Calle Camas.

The following are among the leading shoemakers in Malaga who might be induced to use American leather:

José Sanchez, Calle Casas Quemadas.
Juan Cuevas, 53 Nueva.
F. Chico Ganga, Calle del Marquez de Larios, 2.
Manuel Escamillas, Plaza de la Constitucion, 36.
Francisco Quintana, St. Lucia, No. 10.
Manuel Quintana, Puerta del Mar, No. 5.
José Vallejo, Calle de Granada, 35 to 51.

The following firms are the principal shoe-leather dealers of Granada, Spain:

Esteban & Co., Calle Marquez de Gerona.
M. Fuxet, Lacatin.
Luis Lopez Cabra, Acera del Dairo, 90.
Fabian Navajas, Mesones, No. 46.
M. Vico y Bravo, Calle de Calderos, No. 3.
Mariano Miralles, Alhondiga, No. 2.

BENJ. H. RIDGELY,
Consul.

MALAGA, *November 24, 1900.*

BEET AND CANE SUGARS IN EUROPE.

The central committee of the sugar industry has recently made public its estimate of the crops in Europe for 1900–1901. There was a 5 per cent increase in the acreage planted in beets in Austria-Hungary last year, making a total of 325,000 hectares (803,000 acres) sown during 1899–1900. The crop amounted to 8,400,000 metric tons, or 800,000 metric tons more than in preceding years.

A résumé of the output of beet and cane sugars in European countries may be made as follows:

Country.	1898–99.	1899–1900.	1900–1901.
Beet sugar:	*Tons.*	*Tons.*	*Tons.*
Austria	1,042,000	1,099,000	1,070,000
Germany	1,720,000	1,791,000	1,900,000
France	782,000	919,000	1,070,000
Russia	755,000	898,000	900,000
Belgium	209,000	270,000	320,000
Holland	150,000	170,000	170,000
Denmark	40,000	41,000	50,000
Sweden	60,000	81,000	110,000
Roumania, Italy, and Spain	40,000	110,000	160,000
Total	4,798,000	5,379,000	5,750,000
Cane sugar	2,654,000	2,442,000	2,907,000
Grand total	7,452,000	7,821,000	8,657,000

These figures show an increase of 371,000 tons of beet sugar and 465,000 tons of cane sugar over previous years.

The market price of sugars is almost a fixed quantity, the fluctuations being exceedingly slight; and, as long as the sources of supply can be approximately estimated, the price of this staple article can be assured.

WALTER T. GRIFFIN,
Commercial Agent.

LIMOGES, *January 30, 1901.*

UNITED STATES SHOES IN CANADA.

There is a larger opening in Canada for American boots and shoes than is being taken advantage of by the manufacturers of the United States. Upon inquiry among the dealers here, I find that American shoes are more salable than other makes, but on looking over the returns of imports of boots and shoes into Canada from the United States, it appears that there was only $413,487 worth imported during the fiscal year ended June 30, 1900, and for the three months ended September 30, 1900, the amount was $131,950.

This is a very small percentage of the trade, but it no doubt could be increased if more attention were given to the matter. I believe there is a good opening in nearly all the larger cities of the Dominion for branch stores of manufacturers of the United States.

There is a large demand during the winter months for heavy boots and shoes, in tans and blacks, with rubber soles. This applies particularly to men's wear, though the demand for lady's shoes in tans and black enamel is also large.

CHARLES E. TURNER,
Consul-General.

OTTAWA, *January 31, 1901.*

CANADIAN MARINE INSURANCE.

According to the Montreal Star, Montreal will next season have a new insurance company, which will obviate the necessity of vessels leaving the port of Montreal without any insurance upon them. The name of the new insurance company is the "St. Lawrence Lloyds," and its aim is to carry on an ocean and inland marine-insurance business, with the right to maintain and navigate ice-breaking and wreck-relieving steamers on the St. Lawrence River.

The company proposes to insure Canadian shipping at lower rates than those at present prevailing, so as to enable all vessels leaving the port in the fall to get insured.

Several of the vessels which left Montreal late last fall had to proceed to sea without any insurance, as the underwriters would not take the risk. The company will maintain a fleet of ice-breaking steamers, to enable their insured vessels to more safely leave the port in the autumn. These will probably be on the lines of the Duluth ice boats of the Inman type, whose owner was in Montreal some weeks ago. The new company will be ready for business next season.

The formation of this Canadian Lloyds is the most important step taken for many years in the building up of the St. Lawrence route, as it will tend to destroy the present high rates imposed by the English companies. The capital of the company is $5,000,000.

GUSTAVE BEUTELSPACHER,

MONCTON, *January 11, 1901.* *Commercial Agent.*

CANADIAN TRADE WITH GERMANY.

Trade returns show that Canada imports three times as much from Germany as it exports to that country.

The total value of imports from Germany during the year 1900 amounted to $7,382,000. The chief articles are cement, cottons, velvets, drugs, fancy articles, furs, glass, gloves, iron, white and red lead, silks, etc.

Canada's export to Germany totaled $2,200,000, of which $1,120,000 represented the value of food stuffs; two-thirds of this, however, consisted of indian corn from the United States, which passed through Canada in transit.

At one time, Canada exported numbers of cattle to Germany, but under the altered tariff not an animal has been sent there for three years.

The value of imports from Germany is only about one-sixteenth of that from the United States. Our manufacturers could still further extend our trade, however, by sending commercial travelers, etc. The present time is favorable, as Canadian merchants claim that their goods are excluded from the German markets, and there is a consequent reluctance to buy German goods.

GUSTAVE BEUTELSPACHER,

MONCTON, *January 25, 1901.* *Commercial Agent.*

DEVELOPMENT OF NORTHERN ONTARIO.

The people of the eastern and more densely populated portion of this Province manifest great interest in the development of northern Ontario. The territory referred to comprises that undeveloped portion of the Province lying between the Great Lakes and Hudson Bay. It is a vast triangular-shaped tract, having its apex at the foot of Hudson Bay, while its western side extends along the Albany River to the Province of Manitoba; its eastern side forms the boundary line between Ontario and Quebec, and its base rests upon Lake Superior, Lake Huron, and Georgian Bay. In area, this territory is somewhat larger than the States of New York, Pennsylvania, and Ohio

combined. The commissioner of Crown lands of Ontario, in his report for 1899, has this to say of the new Ontario:

Our knowledge of the character of its soil, the kinds of timber prevailing there, and their value; the geological formations which constitute or underlie the surface, and the existence or nonexistence of valuable mineral deposits; the possibility of raising and ripening crops of grain and of breeding cattle and sheep—in short, of the whole range of facts upon which the usefulness and value of the territory and its capability of supporting a large population depend is very limited indeed.

Those portions of new Ontario which are contiguous to the line of the Canadian Pacific Railway have been laid open to the enterprising explorer, who, aided by the network of water ways which nature has provided for his accommodation, can operate easily and over large areas of territory with the railway as his base of supplies. The search for gold, iron, nickel, and other minerals has brought to light many facts concerning the natural resources of newer Ontario, besides defining in a number of localities the limits and belts in which ore bodies of value are more likely to occur; it has thrown much light on the agricultural and pastoral capabilities of the areas explored, has made known the conditions of the forest growth, revealed the presence of valuable water powers, and in other ways contributed to our stock of information respecting the wild lands of the Province.

Not less valuable have been the results of the direct explorations made from time to time by this department and the bureau of mines under the direction of experienced surveyors and competent geologists, whose reports have been published in the annual volumes of the department and the bureau. These expeditions have accumulated a store of facts considerable in extent and reliable in character. They have shown that the resources of new Ontario in soil, minerals, timber, water powers, and the other raw materials of civilization are extensive and valuable; and, while not indicating the existence of an Eldorado, are yet sufficient to warrant the belief that the northern and western portions of Ontario are quite capable of becoming the home of a hardy, thrifty, and prosperous people, many millions in number.

The climate of northern Ontario is not unlike that of northern Europe, and its soil also is equal to that of many thickly peopled portions of the Old World, while extensive spruce and pine forests and large deposits of gold, iron, nickel, and copper ores are provided by nature to form the basis of large industrial enterprises into whose service many of the water powers which abound there will no doubt some day be largely brought.

Since the above report was made, further and more accurate information has been obtained through explorers and prospectors, more especially through the agency of those directly interested in the mammoth industries at Sault Ste. Marie and in the Sudbury nickel-copper district, and also through the settlers who are pushing their way farther and farther into these northern wilds. The information thus accumulated verifies beyond question the almost inexhaustible richness of the soil, the forest, and the mine.

Should the area of arable land be as extensive as reported, it will certainly prove a remarkable anomaly in mining and forest regions; and the fact that these lands are scattered throughout the lumbering and mining districts, instead of occurring in more compact areas, is not without its compensating advantages, in that it

secures to the settler or farmer certain and easy access to a first-rate market.

The natural outlet for this vast region is the Great Lakes, and the most central point is Sault Ste. Marie. Here, vast industries are rapidly developing. Millions have already been invested, and the projects already under way will, it is said, cost $20,000,000 to complete. These include blast furnaces, pulp mills, rolling mills, etc. But not the least of the great undertakings at this point is the construction of a railroad from the Soo to Hudson Bay, a distance of 500 miles north. The road is already chartered and subsidized, and 150 miles will be completed next year. This project is certainly of far-reaching importance, for not only does it mean the opening up of the vast territory of new Ontario, but furnishes the first permanent line of communication with the region surrounding Hudson Bay and brings the civilized world in touch with the northern forests of the Dominion, which extend from British Columbia and Alaska on the west to Hudson Bay on the east, and from the North Saskatchewan on the south to the barren lands of the Arctic.

HENRY S. CULVER,

LONDON, *January 31, 1901.* *Consul.*

SPELT IN MANITOBA.

A new grain which has been grown to a limited extent in Manitoba this year is called spelt.

It is said to be a Russian grain, and is grown in that country and in Germany. The seed was obtained from a foreign settlement in Dakota. It was sold in Winnipeg last spring by W. G. Douglas, grain dealer, to a number of farmers throughout the Province.

Mr. Douglas has received reports from the farmers who grew this grain last summer, and they all speak very favorably of it. Though the season was a trying one, it produced good crops; as much as 50 bushels being obtained from 1 bushel of seed.

It is claimed of spelt that it produces a heavy crop, is easily grown, stands drought much better than most other grains, ripens early, and makes a superior feed grain for animals. The straw is also said to be better for feed than straw of other grains grown in Manitoba. It is claimed that spelt is a feed grain, in appearance resembling something between wheat and rye when shelled. The berry, however, is held in a tough husk and does not shell like wheat in thrashing. Two berries grow together in the head.

GUSTAVE BEUTELSPACHER,

MONCTON, *January 8, 1901.* *Commercial Agent.*

RAILWAY DEVELOPMENT IN MANITOBA.

The opening of the southeastern section of the Canadian Northern Railway through to Rainy River will mark an event in the development of western Canada. An important link in the proposed new line through to Lake Superior has thus been completed and opened for regular traffic. Two points of consequence (Winnipeg and Rainy River) have been connected by a direct route. While the railway was being built across the prairies of southeastern Manitoba and through the wood country which lies beyond the prairie region, very little attention was attracted to the matter; but now that the road has reached an important point like Rainy River, a considerable traffic is expected to flow over this route.

As a matter of fact, the country between Winnipeg and Rainy River is sparsely settled, though there is a large area of good land tributary to the road, between Winnipeg and the beginning of the wood country. As the wooded district is approached, there is considerable swampy land. The wood country, it is stated, will furnish a large traffic in cord wood for the Winnipeg market. It is expected that a quantity of saw logs will also be brought over the new railway from points tributary to the road or tributary to Rainy River. As the result of the construction of this road, a large sawmill will be established in Winnipeg by the Rat Portage Lumber Company, which will be ready for operation next summer; and it is anticipated that the lumbering industry at Winnipeg will be given a great impetus. Tributary to the Rainy River is a considerable section of good agricultural country, which will be brought into direct connection with Winnipeg. This district will be greatly benefited by the building of the road. It is said the mining interests about Rainy Lake and vicinity will also reap advantages from the operation of the new line.

During the winter, a bridge will be constructed over the Rainy River for the purpose of uniting the southeastern and Ontario sections of the Canadian Northern system, thus forming another through line to Lake Superior on the completion of the Ontario section between Port Arthur and Rainy River.

Returns received from the Rainy River district show that during the past year the cut of pine logs has reached between 30,000,000 and 40,000,000 feet. This is considerably above the cut of former years. One million feet was taken out by the Canadian Pacific Railroad alone.

GUSTAVE BEUTELSPACHER,

MONCTON, *January 10, 1901.* *Commercial Agent.*

DEVELOPMENT OF THE CANADIAN NORTHWEST TERRITORIES.

AGRICULTURAL DEVELOPMENT.

Reports from the Canadian Northwest Territories bear witness to the development of their farming and ranching interests, since the establishment of the mining industry in British Columbia has supplied them with a profitable market within easy reach.

It is stated that the ranges are now well occupied, and settlers are rapidly filling up the farming territory of the Saskatchewan. It is estimated that about 2,500,000 bushels of grain were produced in the Edmonton district last year. This estimate is based on the sale of binder twine, about 3½ pounds of which is required for every acre of grain. The yield per acre has been estimated as follows: Wheat, 15 bushels; oats and barley, 40 bushels.

According to statements, there were no less than three hundred and ninety binders sold last year in Edmonton and Strathcona. The record of implement sales includes twenty-nine thrashing machines, and the districts consumed 260,000 pounds of twine.

These figures indicate the remarkable progress of northern Alberta. The growth, it is said, is by no means confined to the district about Edmonton, for the development of trade at many points along the Calgary and Edmonton Railway shows that the surrounding agricultural country is rapidly filling up. The progress of settlement and the successful development of agriculture combine to transform the hamlets of a few years ago into thriving centers of trade.

The other districts of the Territories, it seems, are just as prosperous as Alberta, and it is said that agriculture in the northern districts has kept pace with the extension of ranching in the center and south. It is even asserted that every part of the territory has been benefited by the construction of the Crow's Nest Pass Railway and by the general reduction of transportation rates to the Kootenai and other mining districts in southern British Columbia.

An immense mineral-producing region employing a great and growing force of workers must obtain its food supplies from outside sources, and railway enterprise has brought the farmers and ranchmen of Alberta within reach of this steady and growing market.

I have been informed that in earlier days it was not an uncommon experience for farmers to bring their butter, eggs, and poultry to Edmonton and carry them away again without finding purchasers. There is now a good market for every suitable line of produce, and

the consequent prosperity is reflected in the increase in settlement, in the larger amount of goods bought per capita, and in the demand to-day for articles which in earlier times were looked upon as unattainable luxuries.

CATTLE AND CATTLE EXPORTS.

According to reports for the year 1900, the exports from Manitoba and the Territories of beef cattle alone amounted to 47,000 head, an increase of 15,000 head over 1899; but the exports in 1899 were 8,000 head less than in the previous year, owing to unfavorable weather. The increase in shipments of beef cattle in 1900 has been mostly in range animals, the shipments of domestic cattle being only a few thousand in excess of the year 1899.

The trade in stocker cattle is not quite as heavy as last year. It is estimated that about 25,000 head of stocker cattle have been sent from Manitoba and the eastern districts of the Territories to the western range. About 5,000 head of stocker cattle have also been shipped to the United States, a decrease of 10,000 head over the previous year.

Shipping to England began in July, and during that month 10,000 head were sent across, while during the two following months the shipments totaled 20,000 head. The price per head ran from $35 to $45 for fat cattle, the weight of steers averaging 1,800 pounds. In addition to these shipments, 50,000 head of beef cattle were sent from Alberta into the mining districts of British Columbia and the Yukon. This trade, it is stated, is in a measure controlled by Mr. P. Burns, who has abattoirs at Calgary with accommodations for 2,000 head of cattle, 1,000 hogs, and 25,000 sheep.

During the past year, there were brought into Alberta about 15,000 stockers from Manitoba and Ontario. This will run the number of cattle now wintering in the district up to 200,000 head.

GUSTAVE BEUTELSPACHER,

MONCTON, *January 21, 1901.* *Commercial Agent.*

MINING IN BRITISH COLUMBIA.

The following article upon the mining industry of the coast of this Province appeared in the Evening World, of this city, on the 29th ultimo. The statements therein can be relied upon as being substantially correct.

There are still many undeveloped mines along this coast which show good prospects. There is also said to be a very large quantity of fine marble, which could be easily quarried if a market for it were

found. Excellent granite and other building stone abound. Some small shipments of granite have been made to Puget Sound ports.

The mining interests of the British Columbia coast have this year come into a much greater prominence than during any other season since the first discovery stakes for gold properties were located, twelve or fifteen years ago. The largest deal ever made on the coast has been reported, insuring the incoming of a very large amount of British capital.

All along the coast, from Jervis Inlet, and even farther north, new claims are being opened up. Several United States syndicates have become interested in Gribbell Island, 400 miles from Vancouver, and about thirty-five men in all are at work there. There is a main copper lead 8 feet in width running across the island, besides which there are other smaller rich veins. Several shipments have been made to the Tacoma smelter for the purpose of thoroughly testing the ore.

On the western side of Texada Island, a company controlled by the Union Iron Works, of San Francisco, is working the old iron mine that has been in operation during the last ten years. There are several other well-known properties on the western side of the island which are doing a good deal of development work. These are mostly owned by United States people. The lime business, lately inaugurated, is proving a decided success.

The Britannia has been the central property of coast mining during the year. Several successive options have been given on this immense property, but as yet none of them has been successfully completed, although a matter of $50,000 in all has changed hands in deposit moneys. Half a dozen of the most experienced mining experts in the country have examined the property over and over again, and there is but one report—that it contains the largest body of low-grade ore yet found anywhere on the coast. The supply of ore is practically unlimited, the development so far showing that it is good to the depth shown by the present workings. The successive bonds, which have been from $1,000,000 to $2,000,000 as a basis, with both United States and English companies, have been allowed to lapse only for the reason that the undertaking was too large for the syndicates interested to handle.

The details of the reported deal for the Van Anda have recently been published. John Lowles, ex-member of Parliament, representing an English company, has paid between $400,000 and $500,000 for 85 per cent of the stock; and the former shareholders are to be given a dividend as well as a partial interest in the new company. The smelter and other works will be put upon a first-class basis, a tramway built to the smelter, and a large amount of dead development work will be done. The capacity of the smelter will be increased and much more custom ore will be treated. About $600,000 has been expended in all on this property.

L. EDWIN DUDLEY,

VANCOUVER, *December 28, 1900.* *Consul.*

PLACER GOLD MINING CLAIMS IN BRITISH COLUMBIA.

The Government of the Dominion of Canada some months ago disallowed the act excluding all persons not British subjects from locating claims for placer gold mining.

In consequence, many citizens of the United States have already acquired claims in the Atlin and other districts in this Province. It

now seems probable that a considerable number of American citizens will come to British Columbia when spring opens for the purpose of locating and working placer claims. The following brief statement of the laws governing the locating and working of placer claims will be of interest to intending miners.

I am indebted to the British Columbia Guide for the admirable condensation of the law which follows:

PLACER MINING.

The size of claim varies from 100 feet in width extending across bed of ordinary stream from bank to bank to an area of 10 acres where there is a large area.

Petroleum.—Conditions under which rights to petroleum can be acquired may be obtained of the Minister of the Interior. They vary according to location and area desired to be tested.

The regulations regarding mining can be had on application to any Dominion lands agent, and any communication regarding minerals may be addressed to William Pearce, superintendent of mines, Calgary.

PLACER-MINING LAWS AND REGULATIONS IN BRITISH COLUMBIA.

Placer mining is defined as the mining of any natural stratum or bed of earth, gravel, or cement for gold or other precious minerals or stones. Placer claims are devided into four classes; and, as the size and location of claims vary according as they fall within one or other of these classes, it will be advisable, as a preparatory measure, to become familiar with the mode and effect of the classification. The following table contains a compilation of the legislation relating to this matter, the claims being measured horizontally, irrespective of inequalities on the surface of the ground. "Creek diggings" shall mean any mine in the bed of any river, stream, or ravine, excepting bar diggings; and a "creek claim" shall be 100 feet long, measured in the direction of the general course of the stream, and shall extend in width from base to base of the hill or bench on each side; but when the hills or benches are less than 100 feet apart the claim shall be 100 feet square.

"Bar diggings" shall mean any mine over which a river extends when in its flooded state; and in "bar diggings" a claim shall be a strip of land 100 feet long at high-water mark, and in width extending from high-water mark into the river to its lowest water level.

"Dry diggings" shall mean any mine over which a river never extends, and in "dry diggings" a claim shall be 100 feet square.

"Bench diggings" shall mean any mine on a bench, and shall, for the purpose of defining the size of a claim in "bench diggings," be excepted from "dry diggings;" and in "bench diggings" a claim shall be 100 feet square: *Provided*, that the gold commissioner shall have authority, where a bench is narrow, to extend the limits of the claim beyond the limits of the bench, but not to exceed 100 feet square.

"Hill diggings" shall mean any mine on the surface of a hill, and fronting on any natural stream or ravine; and in "hill diggings" a claim shall have a base line or frontage of 100 feet, drawn parallel to the main direction of the stream on which it fronts. Parallel lines drawn from each end of the base line, at right angles thereto and running to the summit of the hill, shall constitute the side lines thereof. Legal posts shall be placed 100 feet apart, on both the base line and side lines, and no claim shall extend beyond the posts so placed.

In addition to these classes there is a subsidiary class relating to precious stones alone, a further reference to which will be made when dealing with the granting of

leases. The definition "precious-stone diggings" shall mean "deposit of precious stones, whether in veins, beds, or gravel deposits."

A special right is given to discoverers of new diggings, this being as follows:

If any free miner, or party of free miners, discover a new mine, and such discovery be established to the satisfaction of the gold commissioner, placer claims of the following size, in dry, bar, bench, creek, or hill diggings, shall be allowed, viz:

To one discoverer, one claim 300 feet in length.

To a party of two discoverers, two claims amounting together to 600 feet in length.

To a party of three discoverers, three claims amounting together to 800 feet in length.

To a party of four discoverers, four claims amounting together to 1,000 feet in length

And to each member of a party beyond four in number, a claim of the ordinary size only.

A creek-discovery claim shall extend on each side of the center of the creek as far as the summit of the hill, but not exceeding 1,000 feet A new stratum of auriferous earth, gravel, or cement, situated in a locality where all placer claims are abandoned, shall be deemed a new mine, and vice versa. A discoverer's claim shall be considered as one ordinary claim, in respect to recording, working, and representing.

Every free miner has the right to enter, locate, prospect, and mine for gold and other precious metals upon any land in British Columbia, whether vested in the Crown or otherwise, except Government reservations for town sites, land occupied by any dwelling house and any orchard, and land lawfully occupied for placer-mining purposes, and also Indian reservations. Previous to entry upon lands already lawfully occupied, security must be given for any loss or damage to be occasioned by the miner, and the amount due for such loss or damage, if not paid by the miner, may be collected by process of law. A free miner has also the right to kill game for his own use at any time of the year.

A placer claim must be as nearly as possible rectangular in form and marked by four legal posts at the corners thereof, firmly fixed in the ground. One of such posts shall be marked as the "initial post," and on that post shall be placed a legible notice, in writing, stating the name of the claim, its length in feet, and general direction, with the date of the notice and name of each locator. If any side line of any claim shall exceed 100 feet in length, legal posts shall be placed along such side line at distances not exceeding 100 feet. A "legal post" means a stake standing not less than 4 feet above the ground and squared or faced on four sides for at least 1 foot from the top, and each side so squared or faced shall measure at least 4 inches on its face so far as squared or faced to the above height and size.

TABLE OF CHARGES.

For every free miner's certificate issued to an individual	$5.00
For every free miner's certificate issued to a joint-stock company:	
(*a*) Having a nominal capital of $100,000 or less	50.00
(*b*) Having a nominal capital exceeding $100,000	100.00
Every substituted certificate	1.00
Recording any claim	2.50
Recording every certificate of work	2.50
Recording any "lay over," or every other record required to be made in the "record book"	2.50
Recording every abandonment, including the memorandum to be written on the record	2.50

For any other record made in the "record of abandonments"	$2.50
For recording every affidavit, where the same does not exceed three folios of 100 words	2.50
For every folio over 3, per folio	.30
(The above rate shall be charged for all records made in the "record of affidavits")	
For all records made in the "record of conveyances," where the same do not exceed 3 folios	2.50
For every folio over 3, a further charge per folio of	.30
For all copies or extracts from any record of the above-named books, where such copy or extract shall not exceed 3 folios, per copy	2.50
Where such copies or extracts exceed 3 folios, per folio for every folio over 3	.30
For filing any document	.25
For a Crown grant	5.00

L. EDWIN DUDLEY,

VANCOUVER, *January 14, 1901.* *Consul.*

VANCOUVER-ALASKA DIRECT STEAM COMMUNICATION.

The statement is authoritatively made here to-day that the Canadian Pacific Railway has purchased the steamships and other property of the Canadian Pacific Navigation Company.

The railway now controls the large steamers plying between this port and Japan and China and those sailing between Vancouver and Australasia, and by this purchase has acquired the smaller vessels which have been engaged in the coastwise trade between this port and those of northern British Columbia and Alaska; also, the boats plying between Victoria, Vancouver, and New Westminster.

For several months, there has been considerable agitation in Vancouver in favor of a line of steamers to Alaskan ports. The city government has been urgently importuned to grant a subsidy to any company that would establish such a line; but no action has been taken, and probably the need for it has passed, as it is announced that the Yukon and White Pass Railway has lately purchased two steamers in England to run between Vancouver and Skagway; and the Canadian Pacific Railway will undoubtedly put as many vessels on the run to Skagway, St. Michael, and other ports in Alaska as can be profitably employed.

The people here believe that Seattle secures more than its share of the northern trade, because most of the vessels that have hitherto been engaged in that trade have made Seattle the port of their departure and return, making Vancouver an intermediate port.

I believe the Seattle vessels that have been calling here will continue to do so, and I am of opinion that they will continue to secure

their share of the patronage; but there is a suggestion that the Canadian Pacific Railway will put upon the northern run larger and better vessels than have been employed heretofore. In that case, they may gain more trade for Vancouver than it has had in the past.

L. EDWIN DUDLEY,

VANCOUVER, *January 14, 1901.* *Consul.*

SOUTH AMERICAN STEAMSHIP SERVICE.

Consul Greene, of Antofagasta, under date of December 19, 1900, notes the extended service of the Compañia Sud Americana de Vapores (a Chilean company with headquarters in Valparaiso) and the Pacific Steam Navigation Company (a British company with headquarters in Liverpool), working jointly on the Pacific coast, to San Francisco, as already printed in the CONSULAR REPORTS.* Some years since, the consul adds, the route was extended from Panama to Ocos, in Guatemala. This weekly service is continued, but San Francisco steamers leave Valparaiso for that port only once a fortnight. He continues:

The Kosmos steamships, of Hamburg, leave Valparaiso once a month, calling at a smaller number of ports. Their trade is mostly freight, and they have not much accommodation for passengers. The new service will render valuable aid to trade. The steamers are large and have good accommodations for passengers and freight of all sorts, including healthy space for 500 head of cattle.

It is a matter of regret that the Pacific Steam Navigation Company is not American, as could easily have been the case. It was organized in England fifty years ago by William Wheelwright, of Newburyport, Mass., after his efforts to organize a company in New York had proved unavailing.

ARGENTINE WHEAT AND LINSEED CROPS.

Were it not for my anxiety to give the earliest possible information compatible with accuracy, I would have allowed another fortnight to pass before making any forecasts of the probable result of the harvest just about to commence. At no time is it an easy task to form even an approximately correct estimate of what the quantity and quality of growing crops are likely to be.

*See ADVANCE SHEETS Nos. 943 (January 24, 1901) and 950 (February 2, 1901).

Weather favorable for early-sown grain may be most prejudicial to that sown later. Lands recently put under cultivation may be favored by climatic influences that prove ruinous to farms that have been under crops for several years, or the reverse may be the case.

The weather this year has promoted the development and ripening of the crops. The exceptionally warm and moist winter experienced in most of the agricultural regions prepared the way for the generally expected catastrophes of violent storms and unseasonable frosts. Bad storms there have been, and one frost last month; but the season on the whole has been favorable to the crops, rendered delicate by premature and exuberant growth and thereby exposed to adverse influences.

The extraordinary rise in prices of linseed, due to the failure of the crops in India and other parts, encouraged larger sowings, estimated at 20 per cent. Fortunately, in nearly every district the crop has been a success, and, although the prospects of heavy shipments have brought about a fall in prices, the values still obtainable will give farmers splendid returns.

Some estimate that the quantity available for export will reach 550,000 tons. I fail to see where this tremendous quantity is to come from. Allowing for increased sowing, and for a larger average yield, I consider that if exports reach 400,000 tons, the figure will be an outside one.

The outcome of the wheat harvest can only be fully realized as cutting and thrashing proceed; it will be found, I am assured, both in quality and quantity, inferior to that of last year.

In the Province of Santa Fé, the southern, central, and eastern districts will give the poorest results; the northern and western districts will have good crops, on the average. In the Province of Cordoba the crops are fair. In the southwestern districts of the Province of Buenos Ayres and in the central Pampa the crops will also be fair.

Conservative estimates place the surplus available for export, allowing 800,000 tons for home consumption and flour exports, at, say, 1,000,000 tons.

It must be borne in mind that the grain will be lighter this harvest, that many districts have lost heavily, and that the increase of land under wheat will not compensate for these losses. Then a very warm winter, such as the one past, has seldom been favorable to a large yield, and I can remember years somewhat similar to this when the thrashing resulted in bitter disappointment to farmers who, judging from the luxuriance of their crop, expected a heavy yield.

It is to be hoped that the weather will continue favorable during harvesting, as storms now, although they could not cause actual destruction, would result in great losses through damaging the quality of the grain.

D. MAYER,
Consul.

BUENOS AYRES, *December 13, 1900.*

FORESTRY IN INDIA AND CANADA.

Canada might learn a lesson regarding forest preservation from India. The government of India found that, as a result of the destruction of forests by ax and fire, vast tracts of land had been desolated, and there was danger that the whole country would become barren if the work of destruction were allowed to continue, for a country without forests is likely to be afflicted with alternate floods and droughts.

The work of protecting the forests was begun in India in 1844 and gradually extended, but it has been placed upon a thoroughly scientific basis only during the last twenty years. The service is divided into two hundred and ten departments, under the direction of expert foresters, most of whom have been trained in Germany and France. They are assisted by a number of subordinate officials, many of whom are natives of India. A training school for subordinate forestry officials has been established near Dehra, and it is intended to have similar training schools at all the local centers, as it is desired to have none but expert foresters in the service. Promotions are made according to merit, and it is expected that in a few years about 20 per cent of the superior posts will be in charge of natives selected from the subordinate positions. The foresters have to guard against fires, see that there is no waste in cutting and that the smaller trees are not destroyed, provide for the maintenance of seed-bearing trees and the reforestation of sections denuded of trees. In each province there are state forestry reserves, and altogether these reserves cover an area of more than 80,000 square miles, which will eventually be largely extended. Forest revenue is raised by the sale of timber or other produce and by the issue at specified fees of permits to graze cattle or to cut timber, make charcoal, and gather firewood, bamboos, canes, and other minor forest produce. In the Central Provinces, where the reserved forest area is computed at 19,115 square miles, 1,950,000 cattle were grazing last year, and of these only 5,500 were allowed in the reserves without payment of fees. A large revenue is already derived from the forests by the government of India, and it is expected that it will steadily increase.

In Canada, it is pointed out that the time has come for the various governments to establish systems of scientific forestry. The officials of the Dominion experimental farms began some years ago to encourage tree planting by farmers, especially in the treeless regions of the northwest; but, it is said, it is to the provincial governments, which control the Crown lands in all the Provinces with large forest areas, that the people must look for forestry legislation.

Nearly all of the settled portions of Ontario, Quebec, the mari time Provinces, and British Columbia were at one time covered with forests. Many districts altogether unsuited for agricultural purposes have been denuded of trees. If the provincial governments had profited by the experience of other countries, these districts would have been maintained as forestry reserves and would now yield a large annual revenue. It is not too late to begin the reforestation of many of these districts, although it would take many years to restore them to their former condition. But it is in the districts where the forests still remain standing that scientific forestry can accomplish the best results. It is stated that there are still vast areas of forest lands which may be made a permanent source of wealth to the people, yielding a large annual revenue to the provincial governments and affording employment to many thousands of men. Much of the land now covered by forests is well suited to agricultural purposes, and it would be a mistaken policy to keep the whole of it as a forest reserve; but, in opening the country for settlement, experts should examine each district and determine what land should be maintained as forests and what should be offered to settlers. One of the conditions of land grants to farmers should be that a certain number of acres should be kept permanently covered with trees. Great pains should be taken to preserve forests at the sources of the river systems, as the water supply of the country depends upon them.

It is also stated that in establishing a forestry department in any Province, none but trained foresters should be appointed to the service. In the first place, it would be necessary to engage foresters from abroad. Germany, they say, is the country most advanced in the science of forestry, and the Government derives an immense annual revenue from the forests. Experts should be brought from Germany, and inducements should be offered to young Canadians to go to Germany and study forestry with the understanding that when they become proficient in the science, they can secure employment in the service of their own country.

GUSTAVE BEUTELSPACHER,
Commercial Agent.

MONCTON, *January 10, 1901.*

SHINGLE COMBINE IN BRITISH COLUMBIA.

An announcement is made that all the shingle manufacturers of the mainland of British Columbia have entered into a combination, or pool.

One manufacturer, who is now the mayor of New Westminster, is to close his mill and devote his whole time to the interests of the combination, receiving compensation equal to his average profits for some time past.

All orders are to be turned over to the manager, and he is to fill them, watching the market and making the best sales possible for the association, afterwards making a pro rata distribution of the proceeds.

It is expected that the pool will save a considerable amount in the expense of conducting the business; that better prices will be obtained; and that the profits of the business will be largely increased.

This action on the part of the shingle makers of British Columbia is of great interest to the people of the State of Washington who own cedar timber suitable for shingle bolts, as well as to the manufacturers of shingles in that State.

L. EDWIN DUDLEY,

VANCOUVER, *January 14, 1901.* *Consul.*

LUMBER TRADE OF NEW BRUNSWICK.

The spruce export of the year 1900 has been only a moderately paying one. Early sales for choice dimensions were good, but not extraordinary when the enhanced cost of production is taken into consideration. Prices were not higher than first cost justified. Spruce deals in 9 and 11 by 3—particularly the latter size in long lengths—are scarce, and outside prices are demanded. Logs suitable for making these dimensions are obtainable only in limited and fast-diminishing quantities, a fact that consumers are slow to realize.

Advanced freight and high insurance rates had a curtailing effect on fall business, producers refusing to ship without seeing a prospect of realizing first cost; consequently, wintering stocks are slightly larger than last year, and shipments proportionately less.

Winter operations on the River Miramichi are on a reduced scale, assumed to be 20 to 25 per cent less than last season's production. Shipments from the Miramichi are not able to keep pace with the

cheaper productions from the ports of Nova Scotia and the Bay of Fundy, as the latter largely escape the high stumpage tax to which lumbermen in the northern portion of New Brunswick are subject; cheaper supplies and labor are also available.

The stock of merchantable spruce and pine wintering at Miramichi is about 33,000,000 superficial feet, against 32,000,000 last year and 40,000,000 in 1898; 44,500 superficial feet being pine, against 6,293,000 superficial feet last year.

The shipments from the principal ports, for the last two years, were as follows:

Port.	1899.	1900.
	Sup. feet.	*Sup. feet.*
Miramichi (113,000,000 feet in 1898)	129,000,000	122,000,000
St. John (244,399,666 feet in 1897)	184,192,435	236,459,838
Moncton	.....	41,509,444
Dalhousie	.....	24,060,224
All other ports	112,807,565	64,970,494
Total for New Brunswick	426,000,000	489,000,000

The total shipments of deals from Nova Scotia last year were 146,294,110 feet, against 123,009,504 feet in the previous year.

GUSTAVE BEUTELSPACHER,

MONCTON, *January 9, 1901.* *Commercial Agent.*

GERMAN MARKET FOR AMERICAN LUMBER.

A number of letters from American firms engaged in the lumber business have recently reached this office asking for information as to the requirements of the German lumber market and as to the best means of extending the American lumber business here. I have spent considerable time with several of the leading local dealers in lumber gathering information, and I herewith report the following:

HICKORY.

There is a growing demand for strictly first-class hickory if offered in the market in proper sizes. The German Government requires a considerable amount of this wood to be used for poles to gun carriages. It must come in scantlings of 5 inches square, in lengths of 12 feet 3 inches and 15 feet 9 inches and 21 feet, all measurements, thicknesses, and lengths to have overmeasurements for protection. The wood must be from trees felled in winter—that is, during the months of November, December, January, and February—and the shipment should be made not later than April, when the wood is not

yet wholly dry. Much of this kind of wood is also in demand for whippletrees, which should be 3¼ inches thick and 8 inches and upward wide. Besides these two qualities, which always find a ready sale, hickory is also in demand for all purposes for which this wood is generally used, particularly for bending, in which case it should be shipped almost green. High prices are also paid for first-class hickory spokes, hickory bent wheel rims and fellies, and hickory handles for axes, hammers, and miners' picks.

OAK.

Germany has a fairly good supply of oak, and German oak always brings a higher price than does American, because it has a very fine grain and is of good light-yellow color; and last, though not least, it is cut exactly by horizontal saws to suit the demand. Thuringia and the Spessart Mountains produce the finest oak for cabinetmaking. Much oak is imported from Slavonia, but the quality is inferior to the German. From what I learned, American oak can well compete—and does compete—with that of Slavonia. Wisconsin furniture oak is well liked, but there is room for more. However, it must be borne in mind that northern white oak is always preferred, and it must be of good, light color and of fine grain. It should also be square butted to give good appearance and have no surface cracks, at least in firsts and seconds, according to New York inspection rules. All sizes are in demand. One-inch is used largely for general purposes, with various widths, but with the average width of 10½ inches and of standard lengths. Much of this wood of 1¼ and 1½ inches and in widths of 13 inches and in lengths of 10½ and 14 feet is used for building staircases. All shipments of this kind of lumber should contain at least 70 per cent of No. 1 quality and 30 per cent of No. 2. As to oak logs, which are always in demand by manufacturers of agricultural machinery, they should be—at least a good part of them—from 20 feet and upward long and 22 inches and upward in diameter. Quarter-cut oak of all sizes and of prime quality always finds a ready sale at good prices. There is also a large business done in oak staves, and short oak staves are now being sought for wheel spokes.

WALNUT.

Large quantities of this lumber are always in demand. The first quality must be free from sap and all other defects. One inch and 1¼ inches in thickness is mostly used; walnut shorts, 1 inch thick, 20 inches long, and 25 inches wide, for the manufacture of telephone cases are also being imported, as well as walnut scantling 3 inches by 32 inches for table legs.

COTTONWOOD.

This has been recently coming into favor. One inch is mostly in demand, also three-fourths of an inch and 1¼ inches; but all must be strictly of first-class quality and perfectly dry, and special care must be taken so as not to have the wood spotted or soiled during transportation.

WHITEWOOD.

This is mostly bought in prime logs for veneering purposes by piano and cabinet makers. When shipped in lumber, it should be in 1, 1¼, 1½, 2, and 2½ inches.

SPRUCE.

Spruce would sell in shiploads if American millers would cut it to suit the German market, and it could well compete with Riga and St. Petersburg wood. To command a high price, this wood must be perfectly clear, as much of it is used for boat oars.

MAPLE.

This lumber is in considerable demand for rollers used in mangles and in wall-paper printing. This material should be cut octagon, in order to economize freight, and should be shipped during the winter so as to avoid cracking. Those pieces to be used for rollers in mangles must be 5½ inches and upward thick and 23 and 25 inches long; those for wall-paper printing, 8 inches in diameter and 21 inches long. Special care should be taken to protect this material against air cracks; rollers with cracks are not accepted. White maple is just the thing for table tops used in kitchens and restaurants, and also for kitchen wooden ware in general.

ROCK AND SOFT ELM.

Since boat building is assuming large proportions in Germany, there will always be a good market for this lumber if offered in choice quality.

PITCH PINE.

There is more of this lumber used in Germany than of all the others combined. It is gradually taking the place of other kinds of wood formerly in common use, and the market for this American lumber is already extending from the northern shore of Germany as far south as Switzerland. It is specially in demand for outside window casings, for wagons, freight cars, and for all purposes where the woodwork is exposed. Indoors, it is generally used for flooring, staircasing, etc. When shipped as rough-hewn logs, these should measure on the average 80, 90, and 100 cubic feet per stick.

The timber should average 35 to 40 cubic feet per stick. The lumber must be free of sap and 90 per cent of it should be entirely clear; while some 10 per cent may be only 10 inches wide, the bulk of it should be 11 to 12 inches wide and upward and in lengths of 12 feet and upward, averaging 18 feet. Pitch-pine lumber for flooring purposes should be 1 or 1¼ inches, and 5, 5½, and 6 inches wide. Pitch-pine saps, kiln dried, and yellow pine, and particularly North Carolina pine of 1, 1¼, 1½, and 2 inches and in all widths, of first and second quality, need not go begging for buyers.

AMERICAN LUMBERMEN AT FAULT.

I find German importers of wood generally ready to talk American lumber, but frequently they wind up by remarking that they would be quite willing to buy, but, from their experience with American dealers, it is useless to try. Evidently they are discouraged. It seems that many German firms have been disappointed by not getting promptly what they ordered. In fact, I know of a firm which placed an order in the United States early last year and was repeatedly informed that the wood was "in course of shipment;" but it did not reach the consignee until a few days ago. Others complain—and this is a more serious difficulty in the way of increasing the sales of American lumber—that American millers and dealers will not make up their minds to cut the wood exactly as the German market demands. If this were done, I am sure the export of American lumber would soon be doubled and trebled. There are a number of American firms who have taken the pains to closely investigate conditions here and to fully meet the requirements, and who are now doing a large and lucrative business. But my object is to show that a great deal more American lumber can be sold, and that there is a good opening for many other enterprising firms. This becomes patent at once when it is remembered that only 7 per cent of the lumber imported into Germany comes from the United States, while Austria supplies 43 per cent; Russia, 26 per cent; and Sweden, 11 per cent.

GERMAN CONSUMPTION OF LUMBER.

Of course, the American dealer in lumber will always have to meet in this market a fierce competition on the part of Russian, Austrian, and Swedish rivals, who have the advantage of cheaper freights. Thus, the Government of Austria-Hungary last year made specially low rates on all shipments of lumber that went from Galicia and Bukowina and other points into Germany. But the demand for lumber is steadily increasing, and it is utterly out of the question for Germany to ever supply that demand. In spite of all the

high import duties placed on all foreign woods, which average 28 cents for every 210 pounds of rough timber or logs and $1.15 for every 210 pounds or for 1 cubic meter of dressed timber, Germany has been unable to materially increase her forestry supply. In the year 1899, there were imported into Germany not less than 10,000,000 cubic meters (353,160,000 cubic feet) of timber. During the same period, Germany's own production amounted to from 16,000,000 to 17,000,000 cubic meters (565,056,000 to 600,372,000 cubic feet). If Germany were to supply this deficiency of 10,000,000 cubic meters of timber from her own soil, she would need an additional acreage of 19,768,000 acres. In other words, the percentage of soil now devoted to forestry would have to be increased from 26 per cent to 40 per cent. But it is claimed that throughout all this Empire, not more than 2,471,000 acres fit for that purpose might be found. Even if every available nook and corner were thus utilized and all of the waste lands that are not well adapted for agriculture were planted in pine and other forest trees, it would require, on an average, fifty years for them to be ready for market, and then the supply would not begin to satisfy the demand. Of all sections of Germany, only Bavaria and Wurttemberg have a surplusage of home lumber, all the other districts needing a great deal more than they can ever produce. And as the United States supplies only 7 per cent of this great demand, it will be readily seen that there is an important opening in Germany for American lumber.

RAILWAY DISCRIMINATION AGAINST AMERICAN LUMBER.

But there is another great difficulty under which the American shippers of timber and lumber labor. According to the rules of the German railroads, a special freight is collected on American pitch pine, yellow pine, hickory, and black walnut, which must pay a much higher rate for inland transportation than wood coming into Germany from other countries. Thus, the freight on a carload of 2,200 pounds of American pitch pine from Bremen to Chemnitz will cost $54.03, while the freight for the same distance and for the same amount of pine coming from Norway and Sweden costs but $36.89, being a difference of $17.14 in favor of the Scandinavian competitor. When it is remembered that the railroads in Germany are nearly all owned and managed by the Government, this special freight tariff is virtually a discrimination against American lumber. As the new commercial treaties are now under discussion, it might be well for American lumber merchants to take steps to have this matter settled on a basis of justice and equity. With good qualities of wood, properly cut and dressed, and with a fair chance, American lumbermen may do a much better business in Germany than at present.

BREMEN AS A LUMBER PORT.

Before closing this report, I would call attention to the fact that Bremen offers the very best facilities for the importation of American lumber, having two harbors, one on each side of the River Weser, each with ample wharfage, where vessels may readily discharge their cargoes of lumber, to be reloaded at will on board cars for transportation throughout the Empire.

HENRY W. DIEDERICH,
Consul.

BREMEN, *January 11, 1901.*

AMERICAN FRUITS IN GERMANY.

This consular district presents a virgin field for first-class American fruits, either dried, canned, or fresh. With the exception of three stores which the writer has prevailed upon to handle fruits imported from the United States, practically none of the business houses here deals in this class of our products.

If one of the large fruit concerns in the United States would establish a depot in this city, so that the fruits would not have to pass through the hands of the German middlemen, an enormous business could be built up, in spite of the annoying discriminations against this class of our products; but if the goods have to be hauled over and middlemen's profits deducted, by the time they reach here the fruits are not in good condition, and the prices are so high that the retailer's margin is very small.

The local market for good dried peaches, prunes, pears, and apricots, as well as for evaporated small fruits, is an excellent one if the goods are delivered at moderate prices direct to the retailers. Fairer and easier inspection of fruits at the frontiers is promised, and I have no doubt the Imperial Government will see that this is carried out impartially.

Many varieties of apples, such as Pound Sweets, large Baldwins, etc., which are to be found all over New England, where the "San José scale" is unknown, are never seen in this market. These apples, which now bring comparatively little in the United States, in these days of cheap ocean freights could be shipped to Germany with profit. As a practical suggestion, I would advise that the core ends of the apples be sprayed with a 2 per cent solution of peroxide of hydrogen. The fruit should then be carefully dried and wrapped in soft paper, with a small printed label on each showing how the apple has been treated. In shipping, good, clean fruit crates or barrels should be used.

OLIVER J. D. HUGHES,
Consul.

COBURG, *January 8, 1901.*

GERMAN PROHIBITION OF CANNED MEATS AND SAUSAGES.

The prohibition of the importation of canned meats and sausages has now gone into effect. Paragraph 12, section 1, of the meat-inspection law contains the direct prohibition of canned meats and sausages. According to section 2, other kinds of prepared meats shall be admitted, if it is shown that there is no danger to human health in the manner of their production and preparation.

In its annual report, the Chamber of Commerce of Hamburg says:

According to the first proviso, the staple kinds of prepared foreign meats hitherto imported should be admitted without question, for experience has shown them to be harmless. The proviso furthermore contains a striking condemnation of the prohibition of canned meats.

Not only the public, but also the different branches of the Government, especially the imperial German navy, have used these articles for many years without having found any cause for such restrictions. Only recently, large purchases of American salt pork have been made for supplying the troops in East Africa. The premium of 1,000 marks ($238) offered for the last two years for proof of trichinosis resulting from eating American pork has as yet not been claimed. Suspicions with reference to American lard have been proven by reliable experts to emanate from gross ignorance; and if, in spite of such testimony, they are raised over and over again, it simply furnishes proof that the opposition has little choice of weapons for its warfare.

RICHARD GUENTHER,
Consul-General.

FRANKFORT, *January 14, 1901.*

AMERICAN JAM, ETC., IN ENGLAND.

Reports from this consulate have several times during the past three or four years drawn attention to the great opening in England for American fruits, preserves, jams, pickles, condiments, and other table delicacies. The English people are the largest consumers of jam in the world. It is probably the fact that jam and not beef is now the national dish of the Britisher—or, at any rate, jam (including marmalade) runs bacon a close second. As the United States is now supplying a large proportion of the beef and bacon consumed in England, she can also, by proper methods, capture a great share of the trade in jam, preserves, etc., in this country. In order to secure, and particularly to hold, the trade, however, it should always be kept in mind that the English are very discriminating buyers. They want a good article, and are prepared to pay a good price; and, as a rule, they are indifferent as to the place of origin. It is well known that nowhere in the United States can better American

beef and bacon be bought than can be bought in England, and many American visitors declare that better American beef can be had in London and Liverpool than can generally be obtained in New York or Chicago. However this may be, it is a fact that shippers of American beef to this market understand that they must send over the very best in order to compete with the home and colonial product.

But to return to jams, preserves, etc. The English trade in these lines is increasing all the time. A great revolution is going on in the English table, more especially among the middle and working classes. What were a few years ago expensive delicacies, found only on the tables of the well-to-do, are now to a great extent articles of daily consumption by the masses. Except so far as the very poor are concerned, it may be said that bacon (generally with eggs) and jam or marmalade are on every English breakfast table; and an almost universal "sweet" (the English for "dessert") at lunch and dinner is a "compote," stew or tart, of which the chief ingredient is preserved fruit. In this connection, the following article from the London Daily Telegraph of January 12, 1901, is of interest and contains a number of suggestions valuable to American shippers in the lines indicated:

JAM BRICKS—CONFECTIONERY ENTERPRISE IN AMERICA.

Commercial journals in the United States are just now directing much attention to the vast development that is taking place in California and elsewhere in the manipulation of fruit pulps and jam, and it seems that something like a revolution in the enormous industry is by no means an impossibility in the near future. Something of the same kind has been foreshadowed in this country, and observant visitors to the great exhibitions of grocery and confectionery at the Agricultural Hall last autumn did not fail to note the prominence assigned to partially boiled-down fruits, with a view to their ultimate conversion into preserves, seeing in the idea a possible valuable resource to the British market gardener, now so often handicapped by glutted markets and low prices. The aim, however, of the American experts is to go yet farther and to work their pulps with the due proportions of sugar into practically jam bricks. One need not be very old to remember how housekeepers of the recent past used to pride themselves upon the stiffness and firmness of their damson or cherry "cheeses," which could be stamped out in fanciful forms with a pastry cutter and were not even sticky to the touch. Those were due to careful boiling to exactly the right point, after processes of putting the fruit through fine sieves and bringing the sugar to candy. This, upon a wholesale scale, is what American jam boilers want to accomplish, and many experiments in that direction are now being carried out.

Indeed, so far has it gone that Messrs. Henderson & Simpson, of Thames street, who are wholesale dealers in American produce, a few months ago submitted to the War Office a number of specimens of these "jam bricks" for the use of the troops in South Africa, pointing out the valuable saving that would be effected in freight and transport could oiled tissue paper take the place of the present tins, glass jars, or crockery pots. The samples received the fullest consideration, as the condensed soups supplied through the same house had won special commendation from Earl Roberts, but were not adopted, which, it may be said, did not cause any

surprise to those concerned, who are themselves the first to admit that there are still obstacles to be overcome before a perfect solidified preserve is available. That these will be surmounted within the next few months no one has the slightest doubt, and meantime the samples in this country are attracting much interest throughout the grocery trade. The problems have been overcome with respect to mince-meat, long regarded as impossible of compression, and the traveler, the soldier, the sportsman, or any other to whom small bulk is a consideration, can now purchase a hard, heavy cube of about 2 or 3 inches in size, from which a few fragments chipped off and moistened with sherry, brandy and water, or milk, will prove an excellent presentment of the favorite Christmas delicacy.

Incidental to these inquiries, many interesting facts were to be gleaned as to the growing part that fruit pulps from abroad are playing in the manufacture of English jams. When a single order from one noted London firm alone amounts to 28 tons of apricot pulp from California, it will convey some idea of the magnitude the system is attaining. Plums, pineapples, quinces, apples, and peaches are also largely utilized in this way, and the latest triumph, as it is claimed, in this direction is that of being able to send into this country strawberry pulp. Small wonder, indeed, that the British grower has cause for complaint that "the demand is not what it was" for his products. With the treatment of this material on such a scale, it is not astonishing that those who know the wonderful climatic advantages of California for drying should advocate the carrying of pulp preparation a step farther and presenting the jam itself without the costly encumbrances of old-fashioned packing. As far as dried fruits are concerned, it may be noted that South Australia is the most formidable rival in the English market of the United States, and that, in the opinion of an exceedingly competent expert, if the Australian colonies and New Zealand would pay the same attention to packing and attractive appearance as is done in America, they would easily hold their own in this department. At the same time, it is disquieting to learn that American sweets are coming into this country at the present time in sufficient quantities to cause considerable uneasiness to our own manufacturers of these dainties. Last month's consignment of "gum pastilles" to be vended at a very cheap rate to one house alone was 2,000 barrels, containing 3 cwts. each, and caramels, fondants, and the marshmallow sweets which can be molded into such quaint shapes to appeal to the childish eye are delivered at our wharf sides to the extent of 8,000 to 10,000 pounds a month. Did American manufacturers show rather more elasticity in their trade methods toward the conservative Britisher, the volume of trade in this direction would be even greater than it is.

JAMES BOYLE,
Consul.

LIVERPOOL, *January 14, 1901.*

AMERICAN FURNITURE IN ENGLAND.

The following article from the London Mail of December 27—one of a current series contributed by well-known economic writers dealing chiefly with the question of American competition—was transmitted by Consul McFarland, of Nottingham, under date of December 28, 1900:

THE BRITISH INDUSTRY THREATENED BY AMERICAN COMPETITION.

There is no British industry more seriously threatened by American competition than the furniture trades.

And this is chiefly to be accounted for by the attitude of the British workman,

and particularly the London cabinetmaker, towards machinery and improved processes for the saving of labor.

Let me give an illustration. A master cabinetmaker, who is a pushing and up-to-date man, wished to introduce into his workshop a new machine for cutting angles. It did the work at a single stroke and produced a more perfect job than could be obtained by any other device. He also believed that in his particular class of trade the machine would effect a saving of about 5s. ($1.21) a week for each man employed. But he did not want to put the 5s. in his own pocket; he only desired to get better work, so he made the following proposition to his men:

He showed them the machine, and offered to buy it and pay cash for it, and to allow them the use of it at once. They would be paid the same wages as before, providing they would contribute 1s. (24 cents) each per week towards the cost of the machine until it was paid for. Then it would remain in the shop as the men's joint property.

What could be more fair? Had the arrangement been concluded, the men would have been enabled to do an amount of extra work, which would have put 5s. a week into their pockets, out of which, for a short time only, they would have had to pay 1s. for the use of the machine. But the offer was unavailing.

The workmen's theory was that there was all too little employment in the cabinet trade already, and that any device for saving labor would do harm to the trade, and so they preferred to go on in the old way.

CABINETMAKING AND SWEATING.

In the west end of London there are a few firms who do a very high-class trade, and who uphold the traditions of English cabinetmaking against the world (with the possible exception of Paris); but their trade is so limited in volume that for the present purpose it may be disregarded. The bulk of the domestic furniture produced in London is made in small workshops and sold to wholesale merchants, who in their turn sell to retail furniture dealers, through whose agency it finds its way to the public.

Some of these wholesale houses stipulate that the small maker must buy his wood from them, a practice which is open to the gravest abuse. Furthermore, an order generally represents about a week's work, and the maker has to dispose of it and get the money on Saturday before he can pay his wages and provide for the needs of his own family. It is a miserable trade, and I could say much about it which would reflect more upon the capitalists (I need not call them employers) engaged in the trade than upon the men who have to live by it "from hand to mouth," as the phrase goes.

But we must not run off the rails. The cardinal fact in the situation is that the attitude of the average cabinetmaker towards machinery and improved industrial methods deters capitalists of the better class from embarking their money in the business.

CHEAP AMERICAN LABOR.

A prevalent heresy accounts for the great increase in the imports of furniture to this country from America and elsewhere on the ground that this is not a wood-growing country, and that it is inevitable that where the wood is grown there must the furniture be manufactured.

Such doctrine as this would reduce the great cotton industry of Lancashire to an absurdity; while there are few others which would not be plunged into despair were it once admitted that our manufactures must be limited to the making up of material produced at home.

As a matter of fact, when American office furniture was first introduced here, it came over finished ready for sale and packed in cases. When it is remembered

that shipping tonnage is estimated by measurement and not by weight, it must at once be realized that it is infinitely cheaper to import wood than hollow cabinet ware. For example, a roll-top desk of average size for office use would measure, when packed for shipment, about a ton and a half. But a ton and a half of solid wood would make a lot of desks.

This simple statement seems to dispose of the argument that the trade in American office furniture has been developed merely because America is a wood-growing country. It is true that at the present time furniture from the United States is not, for the most part, imported except in pieces, which have to be put together and polished in England. But this merely arises out of the competition between importers, who have sought to economize on freight charges and damage in transit, the latter being a considerable item. But I have the authority of one of the largest importers when I say that even the hand work which is done in England costs considerably more than it costs when performed in the American factories, where the men's weekly earnings are at least 50 and in many cases 100 per cent higher than in this country.

At the present time, competition in the cabinet trade from America has been directed chiefly towards office furniture.

In domestic furniture, fashion has to be studied, and the American cabinet-maker is too fully employed with his own market to get out special patterns and lay down the plant needful to cater to English tastes. But, in the opinion of those best able to judge, any American firm of standing which chooses to take hold of any branch of domestic furnishing and cater to the peculiarities of the English market could sweep the field in household furnishing just as it has been swept in the domain of office appointments.

CANADIAN POULTRY IN ENGLAND.

Under date of January 12, Consul Halstead transmits the following article from the Birmingham Daily Post of December 25, 1900:

TURKEYS.

The development of the poultry industry of this country is one of the most remarkable features of the last quarter of the century just about to expire. This advance is mainly due to the cultivation of a varied taste in the household. No doubt, taking the year through, the pride of place on the dinner table is still enjoyed by the "roast beef of Old England;" but at certain seasons, and notably at Christmas time, the poulterer competes on very favorable terms with the butcher for the patronage of the public. As the demand for table poultry has so extensively increased, an impetus has been given to an important branch of agriculture which is steadily becoming more valuable and profitable. The supply of home-bred birds, however, is by no means equal to the demand, and just as we have to depend upon foreign countries in a great measure for other sources of our food supply, so we have also to rely upon the foreigner to make good our deficiency in poultry. Until within recent years, we were dependent upon our neighbors across the English Channel; but now, thanks to the improved facilities for the carriage of meat provided on the steamships, this country has become a prominent customer of countries farther away, and particularly of many of our colonies. Canada, the home of so many of our kindred, is one of the colonies which is making rapid progress in the business of agriculture. For some years she has supplied us with corn and beef, and she is now anxious to extend her trade with us in poultry.

The principal feature of the poultry market is the steadily increasing demand for turkeys specially prepared for the table—birds which are characterized by speedy growth, fine quality of flesh, and great breast development. The birds reared in Great Britain under prevailing conditions are naturally the best, and they command the highest prices; but Canada is the home of the turkey. The breed was introduced into Europe from North America early in the sixteenth century, and efforts are being made to place upon the British markets Canadian birds which will bear favorable comparison with those from any other country. It is now about ten years since an attempt was first made to bring Canadian poultry to England for the Christmas markets. At that time the facilities for the carriage of perishable goods on board ship were in a very crude state. The birds were packed loose in their feathers in cases and conveyed in the ship's hold to Liverpool. The journey usually occupied nine or ten days, and, as the birds remained so long in a close atmosphere, they were found to be in very poor and almost unsalable condition on their arrival. Trade consequently was poor and the experiment of shipping dead poultry to England was a failure. The steamboat companies were appealed to, but very little improvement was made, and during the next three years not more than 1,000 or 2,000 birds were consigned to this country. Still, the merchants on both sides of the Atlantic did not despair, and ultimately representations were made to the steamship companies that the poultry trade might be enormously developed and made to pay all parties if only proper storage on the boats were provided for the birds. In the belief that something would be done, measures were adopted for sending over altogether about 50,000 birds; but the experiment was again disastrous, and the shippers suffered serious losses. Then the Canadian Government took the matter up, and in 1896 communicated with different salesmen in England, asking for their views on the important question of the packing and shipment of poultry. One Birmingham gentleman who was written to impressed upon the Government the necessity of a proper system of cold storage upon every boat and the adoption of an improved method of packing the birds so that their quality might not be impaired by the journey. If those principles were carried out, he predicted a great future for the Canadian poultry trade generally. These suggestions were acknowledged in a letter of thanks, and on the technical lines which had been emphasized by all their correspondents the Canadian Government approached the steamship companies. The result was that before the next season commenced several new vessels which had been added to the service, as well as the old vessels, were fitted with cold-air chambers.

The previous season had been so disastrous that the merchants were somewhat afraid, and during the winter of 1896 the consignments of turkeys were not more than half those of the previous year. The result, however, was fairly satisfactory, and the trade in the succeeding years advanced enormously, in comparison with previous seasons. But, while the cold-air process succeeded, the packing was decidedly poor, and the condition of the birds was not so good as it should have been. It was obvious, therefore, that unless the method of packing was improved the trade must again fail, and so during the past summer two or three poultry experts were sent from England to Canada to teach those engaged in the Canadian business how to collect and pack the birds. Their experience has been very beneficial, and now for the first time the poultry is being brought over under the most favorable conditions for the market. The merchants first of all visit the farmers in the autumn and buy the birds, which are delivered alive on specified dates at the important centers, such as Toronto and Montreal. Then they are killed and plucked and hung up for twenty-four hours in cold chambers. At the end of that time each bird is separately wrapped in parchment paper, and they are packed in cases, each case containing a dozen birds. The cases are conveyed by train to the ports

of Portland, Me., St. John, New Brunswick, or to Boston and placed in cold-air chambers on board ship. Cold air is pumped into the chambers by day and night, and the temperature is maintained just above freezing point. The birds are never frozen, but kept in a chilled state, and, as the quality of beef and venison is said to be improved by hanging for several days in the larder, so also is it claimed that the quality of the Canadian birds, which are placed on the British markets within fourteen days of being killed, is quite as good as that of birds killed in the ordinary way in this country. At present, the season for Canadian turkeys in England commences a week before Christmas and continues until the middle of January, or about a month altogether. The birds are rather larger than the English birds, ranging from about 8 to 30 pounds in weight. The breed is that of the American Bronze; but as the trade develops smaller birds will be cultivated, and then Canadian turkeys may be expected in our markets all through the English season, which commences at the beginning of December and continues until the end of March. During the month this year it is estimated that at least 300,000 Canadian turkeys will be shipped to England. The consignments will be distributed at Liverpool and dispatched to all the principal centers of the country. Birmingham's share will be probably 70,000, and of these one local salesman alone will receive upwards of 40,000 from the King Darrel Produce Company, of Toronto, one of the pioneer companies in the Canadian poultry trade.

CHICKENS, DUCKS, AND GEESE.

Chickens were first imported from Canada about two years ago; but, as in the case of the turkeys, the birds arrived in poor condition, owing to the inexperience of the men engaged on the other side of the Atlantic in the work of packing. Altogether some twenty cases, each containing 150 birds, were received. The experiment was a failure, and consequently last year there was practically no trade in Canadian chickens. This season, however, under the improved conditions in regard to carriage and packing, an effort has been made to create a demand for the birds in this country. The season opened in October and will close in March. During the early weeks several important consignments of birds arrived in England, and a large proportion were brought into the Birmingham market. They were not only salable, but were considered to be almost equal to the English birds. Their excellent condition was mainly due to the fact that there were only 24 in a case, and that each bird was packed as carefully as the turkey. The fowls are mainly crossbred, and with a view to improving the quality and producing table poultry of the best description Plymouth Rocks are being largely exported from this country to Canada for crossing with the poultry reared by the American farmers. For Christmas consumption alone, some two hundred cases of birds were disposed of in the Birmingham market. Shipments arrive weekly, and it is generally believed by the end of March, when the season closes, the experiment of bringing Canadian chickens to England will be found to be a complete success. If so, the trade will become far more extensive another year.

A few cases of ducks were consigned to England last year, and they met with a satisfactory sale. This season nearly 100 cases arrived in this country, each case containing 12 birds, merely for the Christmas market. They average in weight from 8 to 16 pounds a couple; but, as the demand only lasts about a fortnight at present, there is room for development.

The same may be said of geese. Two years ago, about 300 cases of geese were received in England, each case carrying from 14 to 16 birds. They averaged 8 to 12 pounds in weight, and, being rather small when compared with the English birds, buyers were not so keen in demand. The quality, too, was not so good as that of the English, Irish, or French birds. Experience was the same last year, and, as the birds have not yet reached the quality and size of those to which we

have been accustomed, few Canadian geese are on the English markets this year. But the farmers are already trying to improve the breed, and the opinion prevails that in the near future the Canadian poultry trade in this country will assume large and rapidly increasing dimensions. If the quality of the birds is maintained and their condition is assured, the British public will reap the benefit of the enlarged competition, for the Canadian birds are retailed in the market at a cheaper price than those raised in England.

BIRMINGHAM'S FOOD SUPPLY.

The following from the Birmingham Daily Post of December 24, 1900, was transmitted, under date of January 2, by Consul Halstead:

THE COLD-STORAGE SYSTEM.

So large is Birmingham as a food-distributing center that it is computed that upwards of a million persons are regularly supplied with food from the city markets. Consequently there is a rapid and extensive turnover every week in perishable articles, and, as the supply of home-grown meat, fruit, and vegetables is very disproportionate to the ever-increasing demand, it is supplemented by huge quantities of food from abroad. Rapid and regular, however, as are the sales, it is impossible to arrange the supply and demand to a nicety. Sudden changes in the weather, too, often place the wholesale butchers and poulterers in a difficulty, the result being that perishable goods, in large quantities, are left on their hands.

It is then that the benefit of cold-storage chambers is felt. The utilization of refrigerating processes for commercial purposes has developed so wonderfully of late years as to suggest endless possibilities. What our ancestors deemed impossibilities have now become matters of everyday simplicity, and articles of food which they regarded as luxuries only to be had at certain seasons of the year are now, owing to these refrigerating processes, almost everyday articles of diet. The system of cold storage was established in Birmingham about thirteen years ago. When the new meat market was erected, the operations of the Birmingham Refrigeration Company—which bears the name of Professor Linde, of Wiesbaden, who a quarter of a century ago introduced the system of cold production—were considerably extended, and additional works of a similar character will be opened at Digbeth.

The foreign-meat supply continues to increase, and it is difficult to say how large a part it now plays in the feeding of the English people. For a long time people could not be persuaded that frozen meat was palatable, but cheapness and improved quality in course of time made many converts. Even now there is a strong prejudice against it, but for some years the frozen mutton of Australia and New Zealand and the frozen beef of America have formed in a large measure the staple meat supply of the laboring classes.

During the last twenty-five years, the meat trade with the United States has developed into an important industry, and the cold stores are regularly filled with hundreds of quarters of American beef.

In one room are thousands of carcasses of foreign sheep in their diaphanous cotton coverings, bearing testimony to the enterprise of the breeders in Australia, New Zealand, and South America. They are piled one on top of another like bricks. On their arrival in Birmingham, they are immediately taken to the stores, and any signs of thawing which may have been developed since their removal from the refrigerating rooms of the vessel in which they were brought are at once corrected, and the meat remains dry and good, ready for the meat salesman when he

needs a supply. It is estimated that quite 30,000 sheep carcasses can be stored, and when the new rooms are completed this number will be increased by nearly 80,000. The quantity of pigs indicates the popularity of American bacon. Large consignments of chilled pork are also received from the States. This is one of the newer importations, and it seems so far to have been attended with satisfactory results. The pork is said to be of high quality and rich flavor, and undistinguishable from English pork, except in the color, which is not quite so bright as that of pork recently killed. This American meat has the merit of being slightly cheaper than the English.

The growth of the Australian rabbit trade has been phenomenal. Upwards of 14,000,000 rabbits are, it is stated, annually received in England, and boxes containing several scores of thousands were to be found a week ago in the freezing chambers. The fur is as stiff as the porcupine's quill, and the skins as hard as stones. Some of the animals were placed in the stores fully six months ago. There are rooms in which general commodities are stored, while special chambers are set apart for fresh-killed meat, which are kept at 36° F. The latter rooms are connected with the stands in the meat market and with the slaughterhouses by a specially arranged set of overhead rails. By this means, sides of beef can be easily run by the hydraulic lifts direct into the stores. Canadian eggs and Danish and Siberian butter, of which there would appear to be an ever-increasing supply, are preserved, and large consignments of British Columbia salmon—big fish weighing nearly half a hundredweight—are being constantly received. In the new works, special storage rooms will be set apart for the reception of fish and fruit. Canada and Servia send large supplies of turkeys during the winter, geese come from France and Italy, fowls from Russia, and hares from Belgium, all of which, in their turn, find a brief resting place in these strange storehouses.

MANCHESTER EXPORTS TO THE UNITED STATES.

Consul Grinnell sends from Manchester, January 12, 1901, tables showing the exports of cotton yarn and cotton velvets, cords, and fustians from that district to the United States for the years 1899 and 1900, as follows:

Exports of cotton yarn to the United States during the years 1899 and 1900.

Month.	1899.	1900.
	Pounds.	*Pounds.*
January	152,225	290,342
February	160,899	330,655
March	202,893	440,332
April	129,914	391,701
May	186,893	390,032
June	206,479	363,709
July	196,253	284,360
August	179,973	257,220
September	209,139	201,819
October	250,302	200,351
November	244,305	189,551
December	370,139	196,157
Total	2,489,414	3,536,229

Quantity of cotton velvets, cords, and fustians exported to the United States during the years 1899 and 1900.

Month.	1899.			1900.		
	Dyed.	Undyed.	Total.	Dyed.	Undyed.	Total.
	Yards.	*Yards.*	*Yards.*	*Yards.*	*Yards.*	*Yards.*
January	.....	.....	834,796	445,024	713,177	1,158,201
February	.....	.....	575,910	470,843	865,937	1,336,780
March	.....	.....	1,053,861	639,086	1,188,145	1,827,231
April	.....	.....	1,107,923	385,467	830,972	1,216,439
May	.....	.....	1,570,520	530,147	961,536	1,491,683
June	.....	.....	1,535,170	710,383	663,461	1,373,844
July	.....	.....	1,066,555	725,950	722,320	1,448,270
August	.....	.....	1,326,544	800,911	826,590	1,627,501
September	.....	.....	1,029,884	635,396	574,704	1,210,100
October	472,350	621,766	1,094,116	452,316	473,515	925,831
November	461,395	391,206	852,601	274,621	671,633	946,254
December	487,754	501,878	989,632	181,528	513,560	695,088
Total	.....	.....	13,037,512	.....	.....	15,257,229

FLAX IN EUROPE.

The annual flax markets at Breslau, Germany, December 11, 1900, and at Trautenau, Bohemia, December 13, 1900, were largely attended. While great interest in these meetings was manifested, both by flax dealers and manufacturers, there was very little business transacted, on account of the exorbitant prices of raw flax. Russian raw flax is going up in price daily, and it is evident that the material on hand in Europe will not cover the demand for consumption.

There never was a more opportune time to introduce American flax into Europe than the present.

The flax harvest of Russia this season is probably 40 per cent less than that of last year, although the harvest of 1899 fell short of being an average one. The worst feature about Russian flax of this season is now disclosed—it is not only wanting in quantity, but also in quality. Flax spinners usually produce from 100 pounds of Russian flax 45 to 55 per cent of good fiber, but the flax of the season of 1900 only yields 26 to 29 per cent. Besides this, the price of the raw material this year has increased threefold compared with previous years.

It has been said by growers and dealers that four years of good harvests in Europe will be necessary to bring flax down to a normal price.

At the present time, Russian flax meets with no effective competition in Europe; the flax spinners of Germany, Belgium, Austria, France, Great Britain, and Italy are chiefly dependent on Russian

flax, the production of raw flax in those countries being only an insignificant percentage of their consumption.

To meet the very difficult situation of the flax market and to bring the prices of yarn into consonance with the high-priced raw material, the spinners of Germany, Austria, Belgium, and France have made an agreement that on and after January 1, 1901, only 85 per cent of their spindles shall be operated. It is well known that many flax spinners are operating only one-third and others only one-fourth of their spindles.

Austrian flax spinners have united and bought one of the largest Bohemian mills, with 12,000 spindles, with the positive agreement that the machines are to be sold and that the mill shall never again engage in the spinning of flax.

All this trouble arises solely from want of raw flax. European flax spinners hope that American growers will take advantage of this opportunity to introduce flax into Europe. It is certain that American flax could at all times successfully meet Russian competition. It was only the other day that I learned from a German flax expert that the American flax fiber, on the average, is much superior to the Russian.

WILLIAM K. HERZOG,

ZITTAU, *December 21, 1900.* *Consul.*

RICE TRUST IN GERMANY.

Another trust has sprung into existence, with headquarters in Bremen and a capital stock of 400,000,000 marks ($95,200,000). It is called the "Reis und Handels Aktien Gesellschaft" and is a combination of all the German rice mills, five of which are located in or near Bremen, three in Hamburg, and one in Flensburg. These nine mills become the property of the new association, which will control the buying of the raw material and also the selling of the polished goods. This new trust will no doubt bring hardship to many firms and individuals here in Bremen, who for years have been engaged in this business; but it is claimed that not cupidity, but necessity, compelled the German rice mills to form this combination and to do away with a large number of so-called middlemen.

The reasons given for this step are, first, the increased number of mills that have been built in the East Indies, where most of the rice is grown. These mills, it is claimed, do not produce as good an article as do their European competitors; but they have found an extensive trade for their goods in many countries in the

Tropics and south of the Equator, where the people are satisfied with an inferior quality of rice. Rice polished in the Indies does not find its way readily to the markets of northern countries, because the goods suffer from heat during transportation. Yet it is feared that with lower prices, this article may gradually find a market everywhere and compete seriously with the European mills.

The other reason urged for this new combination is the tariff war Germany had with Russia some time ago. Germany had refused to treat flour of Austro-Hungarian origin as coming from one of the most-favored nations, because it might be ground from Russian grain; whereupon Austria-Hungary retaliated by warring against rice polished in Germany but originating in a different country. In consequence of this, new rice mills were built at Trieste, Pesth, and Aussig, which now supply the entire demand for rice in Austria-Hungary; that market was thus lost to the German mills.

In order to protect themselves and to keep up their production, these nine mills claim that they were compelled to reduce expenses, which they propose to do by placing their entire business in the hands of one board of managers with a central office, which will do all the buying of the raw material on the rice exchange of London or in the East Indies, and will have the exclusive right of selling direct to the trade. It is expected that in this way the prices for rice will be reduced so that it can be sold to the consumer cheaper than ever before.

HENRY W. DIEDERICH,

BREMEN, *January 9, 1901.* *Consul.*

THE HARVESTS OF 1900 IN GERMANY.

The official crop statistics of Germany published at the close of the calendar year give the following results for 1900 as compared with those of the preceding year (the unit is the metric ton of 2,204.6 pounds):

Crop.	1899.	1900.	Increase.	Decrease.
	Tons.	*Tons.*	*Per cent.*	*Per cent.*
Wheat	3,847,447	3,841,165	.....	0.2
Rye	8,675,792	8,550,659	.....	1.5
Barley	2,983,876	3,002,182	0.6	.....
Oats	6,882,687	7,091,930	3	.....
Potatoes	38,486,202	40,585,317	5.5	.....
Clover	8,277,273	6,781,284	.....	18
Lucerne	1,351,104	1,316,441	.....	2.5
Hay	23,767,790	23,116,276	.....	*651,514

*Tons.

In respect to the average yield per hectare, the crop of rye, wheat, barley, oats, potatoes, and meadow hay for 1900 exceeded slightly the mean annual average for the previous eight years, while the yield of clover and lucerne was considerably below the mean average during the same period.

FRANK H. MASON,
Consul-General.

BERLIN, *January 16, 1901.*

AUTOMOBILE REGULATIONS IN AMSTERDAM.

I transmit herewith a translation, made in this office, of the police regulations of Amsterdam respecting automobiles, the same being part of a report made to J. F. Havemeyer & Co., an American firm established in London.

I may state in this connection that automobiles are coming into general use here, and that prospects for American machines are good. They should be made narrower than is customary with us, 4 feet 8 inches being too broad for roads here.

FRANK D. HILL,
Consul.

AMSTERDAM, *January 11, 1901.*

POLICE AUTOMOBILE REGULATIONS IN AMSTERDAM.

(1) Drivers (Chauffeurs) of motor cars have to comply with the police regulations respecting riding in streets and other places with carriages having one or more wheels and other means of transporting merchandise, and with the rules on bicycling concerning riding and passing streets and places.

(2) The velocity may not be greater than that of a horse going at a moderate gait.

(3) The motor cycles must be provided with a continuous-sounding bell or a strongly blown horn.

(4) The motor shall only be used as motive power for the cycle itself.

(5) Every cycle must be provided with two lamps throwing a clear light to front and sides from half an hour before sunset until half an hour before sunrise; one of such lamps will suffice at the front of the carriage for a three-wheel cycle.

(6) Carriages may not be charged higher than 1,000 kilograms (2,200 pounds) per wheel; if the carriage weighs over 3,000 kilograms (6,600 pounds), the rims of the wheels must be at least 10 centimeters (about 4 inches) broad.

(7) Not over 10 liters (10½ quarts) of oil, at the highest, may be stored in the carriage, and the oil must be stored in metal reservoirs.

(8) The reservoirs, pipes, and valves must be perfectly tight to prevent leaking.

(9) The residues of the fuel must be thrown out without damage to the surroundings.

(10) The driver must be at least 18 years of age.

(11) The driver must, on first call, show his permit to the policemen.

(12) The number of the carriage, as prescribed by Government regulations, must always be visible.

TYPEWRITERS IN THE NETHERLANDS.

The Remington was the first typewriter introduced into the Netherlands, and has been on sale here since 1884. In the beginning, it was difficult to induce Dutch business men to use a machine for their correspondence, especially as typewriters then were not perfected as at present, and sales were small; but by advertising, the Remington paved the way not only for that particular make, but for other machines as well.

The principal typewriters now in use are the Remington, Underwood, Yost, and Hammond, while several less expensive machines, such as the Barlock, Oliver, Umpire, Franklin, Blickensderfer, etc., have been introduced here. The prices are: First-class machines, $100 to $120; second class, $60 to $80; the cheapest machines, about $40.

Lately, a large number of typewriters have been sold at Amsterdam and Rotterdam, but outside of the cities very few are in use. Good machines are in demand, the price being of lesser importance. Merchants do not care whether they have to pay $50 or $100, as long as they get the best.

In proportion to the population of different countries, typewriters are used more in the Netherlands than in Belgium, Germany, and France, though less than in the United States and in England.

It is next to impossible to secure reliable figures concerning the sale of typewriters in the Netherlands, as large dealers are unwilling to state facts, while the smaller agents exaggerate their sales. All agents, however, agree in anticipating for the year 1901 an increasing demand in this trade.

American typewriters are now used in this country in Government offices, public institutions, typewriter schools, asylums for the blind, lawyers' offices, banks, insurance companies, mercantile agencies, and in some offices of manufacturers.

FRANK D. HILL,
Consul.

AMSTERDAM, *January 22, 1901.*

GLASS INDUSTRY OF LORRAINE.

There is hardly in all Germany an industry more productive and flourishing than the glass industry in its various branches.

While the trade papers of other industrial lines are complaining about the decline of business and consequent reduction in profits, and while it has been found necessary in many important branches

to curtail the output and even close factories here and there altogether—not only on account of overproduction, but because the trade had fallen off—the glass industry has not only been able to hold its own, but even to increase its output. This has been due not only to increased activity on the part of the manufacturers and their agents, but also to the fact that the glass factories are able to produce excellent goods so cheaply that they can compete in the world's markets against those of all other nations.

Some fifty years back, Bohemia was leading in nearly all kinds of glassware, from the cheap grades up to the very best and finest, and it was hardly thought possible that these products would ever have to fear a competitor. To-day, Germany has almost surpassed her rival.

The glass factories in Lorraine—four in number—are making hollow glass of all kinds and description, watch and spectacle glasses, lamp glasses, window glass, glasses for pendules and for scientific instruments, etc. While a good deal of the output is sold in Germany, most of it finds its way to foreign countries, and the United States has always been a good customer. For the last three years, however, the export of the glass products of Lorraine has increased remarkably, as shown by the following figures, taken from the records of the United States consulate at Kehl:

1897	$64,707.53
1898	67,177.26
1899	139,498.76
1900	177,576.17

MAX ADLER,
Vice-Consul.

KEHL, *January 12, 1901.*

ATTACHMENT OF WORKMEN'S WAGES IN FRANCE.

The following is a summary of a report by Consul Brunot, of St. Etienne, dated January 5, 1901, the full text of which has been sent to the Department of Labor:

At the beginning of 1895, a law was passed by both Chambers of France according the right to a creditor to make a seizure on the wages of a workman, his debtor. The principal features of that law are as follows:

The wages of workmen can not be attached beyond one-tenth, regardless of the amount of these wages. A similar proportion is reserved for clerks and functionaries whose earnings do not exceed 2,000 francs ($400).

The attachment on the wages or salaries can not be effected except on the visa of the clerk of the justice's court of the place residing in the district of the debtor,

Notice of the judgment is given to the employer or to his representative paying the wages. One attachment only can be authorized by the justice of the peace. If other creditors come forward with their claims, these are inscribed in a special register in the office of the justice of the peace, and notice is given to the debtor and to his employer by registered letters.

If the judgment is given in default, the debtor is advised by registered letter within five days.

The debtor can always put in a protest, and in such case the parties are convened by the court and the case is judged on its merits.

Such is the law on attachment as it prevails at present, but for various reasons it has not given general satisfaction. The creditor, for instance, frequently recovers but insignificant amounts of his claims, and where there are several it happens that the legal expenses absorb, and in some cases exceed, the total amount of the debt.

In 1898, the Chamber of Deputies modified the law as regards the mode of procedure. The justice of the peace, for instance, was enjoined to attempt an amicable arrangement; and if this could not be effected, if the amount of the debt was not contested, or if the debtor did not present himself, the justice allowed the attachment within three days; the debtor had the right to contest the debt within eight days; etc.

The Senate committee to which the bill was referred asked the Minister of Commerce to institute an inquiry among companies and large employers as to their opinion of the law of 1895.

A circular was prepared pointing out the divergence of views of the committee, some of whom were in favor of completely abolishing the attachment of workmen's wages in view of the fact that the expenses, no matter how simplified the mode of procedure might be, were at the charge of the debtor and were considerable, and after all only a tenth part of the wages could be attached, which frequently had to be divided among a large number of creditors; others, on the contrary, esteemed that if the law of attachment were abolished, the position of the workman would be injured, as he would lose all credit.

About 2,000 of these circulars were sent out, and 817 answers were received. A few characteristic answers are noted below.

One of the principal criticisms was the exaggeration of legal expenses, which were in many cases in inverse proportion to the amount of the debt, sometimes reaching 1,000 per cent.

It would seem that seizures have noticeably increased since the application of the law of 1895 Before that time, workmen were obliged, under pain of dismissal, to pay up the total amount of attachment within a period of two months. This measure is now considered impracticable. Merchants show a tendency to make seizures a normal means of getting paid, while the workmen make a pretext

of the first seizure to pay no more to anybody; so that the proportion of creditors to that of workmen has passed from 1.25 per cent in 1895 to 24 per cent in 1898. The aggregate sum represented by the seizures also increased tenfold.

Again, the law serves for recovering the most insignificant sums. Since the mode of procedure is so easy, the debtor is pursued for amounts of less than $1, to which the expenses of recovering are added. The creditor is generally regardless of costs, as these are charged to the debtor.

The period during which the workman has to yield a part of his wages is also much prolonged. One manufacturer wrote that out of 180 workmen whose wages have been attached, 100 have not been entirely free during five years. Another said that one of his factory women would not live to see her debt effaced, as it would take twelve years at the rate of 6.80 francs per month. One miner, seized in 1896, will not be freed before 1921.

The workman whose wages are attached does not always submit to the law. After a certain number of pay days, he may leave the country, if he works in a small town, or may change, in case of a large town, into another factory. If his creditor succeeds in finding him, he disappears again. Many managers complain of the inconvenience caused to the establishment by this instability of personnel.

The notification of a seizure frequently creates an unfavorable impression on the mind of the employer, who sees the beginning of a responsibility which numerous heads of industries refuse to assume; for instance, the obligation of keeping a special account, of furnishing proofs of the sums retained, of appearing before the justice of peace when required, etc. The employer is practically placed between the hammer and the anvil, he is made recovery agent for a creditor who may not be deserving. It happens frequently that, to avoid the inconvenience involved, the employer simply dismisses the workman.

As to the moral effects of the law, it is said that a workman who quits his employer when his salary is retained falls into the habit of shirking payment, and after a few experiments he grows to appreciate this method of doing business, and he becomes a rover. Then the employee, although he may be ready to pay what he owes, objects to the additional expenses; he can not be convinced that these are just.

The attachments frequently fall on the wages of the children, sometimes going to pay debts contracted by parents who have abandoned them.

The position of the creditor under the law of 1895 is also said to be unfavorable, as circumstances are not wanting which render

his claim more or less illusory, such as the disappearance of the debtor, the dismissal of the workman by the employer, and the time it takes to recover the sum either by reason of the exaggeration of the expenses or of the number of new creditors who claim part of the amount retained.

The most numerous criticisms are directed against houses which sell on long credit; it is said that the law has developed establishments practicing usurious systems.

The pecuniary and moral advantages which result from the decrease of credit under the régime of nonattachment were insisted upon in about two-thirds of the answers. The facilities and temptations of spending would be much reduced, they say, and the workman would learn habits of order and economy.

Those in favor of the law argue that the attachment of the wages is the fundamental basis of credit for the workman; that credit induces him to economize, the sums paid being represented by his furniture, clothing, etc.; also that if the wages can not be seized and credit can not be obtained, the workman will have recourse to money lenders without gaining anything by the change.

Out of 817 replies, 69 only (of which 63 represent 43,245 workmen or employees out of 525,597) were for maintaining the law. A reform of expenses was recommended by 173 establishments (151,403 workmen). Fifty-seven houses were in favor of maintaining the law, but proposed other reforms; for instance, that the attachments should only be possible for debts contracted for what are called the "necessaries of life." Among debts to be excluded were those to saloons and to establishments practicing the long-credit system.

As to the action to be taken on the law by the Senate committee, it is difficult to foretell. It is probable that it will accept the modifications voted by the Chamber, with the addition of certain amendments.

I am indebted to the French Office du Travail for a large portion of the foregoing report.

COUNCIL OF LABOR IN MARSEILLES.

In connection with the following memorandum, which embraces all the important features of some new labor legislation in France, I submit an official document containing the various decrees and orders in relation thereto.*

By virtue of the decree issued September 17 by the President of

* Transmitted to the Commissioner of Labor for reference purposes.

the Republic and limited in its application for the present to the city of Marseilles (contained in the publication mentioned), preliminary steps have been taken to organize in this community a council of labor, for which elections will soon be held. While the practical effect of the transactions of this council remains to be seen, it may be said that the plan of organization indicates a feeling on the part of capital and labor favorable to harmony of work and purpose. No doubt, the recent series of disastrous strikes in Marseilles has encouraged this sentiment. In the past, it has been true in France as elsewhere that employers have not always looked with favor upon organizations of labor and have discouraged many of the best of their workmen from participating in movements which they believed to be controlled by elements dangerous to society, or at least inimical to their own interests. This attitude, provocative of reprisals, has had a deterrent effect upon many intelligent workmen, who would otherwise have been glad to affiliate more actively with their fellows.

As an academic proposition, it probably would not be disputed that organizations of employers and employed, acting in all cases on the fundamental principle that their interests are not divergent, would be more desirable than a state of complete disorganization; and the State seems to have adopted this view by officially recognizing them as permanent factors in society. To do so, it has now established in a tentative way at Marseilles the right of organizations of employers and employees to consider grievances of various sorts affecting the entire population of employers or employees, or groups thereof, through a council of labor. The legislation has for the present conferred upon the council merely advisory powers, leaving the right of settlement to the established authorities. The mission of the council of labor will be to give advice upon all questions bearing upon labor; to prepare reports at the request of the Minister of Commerce and Industry; to publish the current and normal rate of wages; to determine the current and normal length of the workday; to seek means of preventing or terminating strikes or lockouts; to prepare reports upon the division of allowances made by the public to institutions of patrons and employees; to investigate and report upon the execution of laws, decrees, and orders concerning labor, and modifications which might prove beneficial thereto.

The council will be formed of three elements: (1) employers, (2) employed, (3) "prud'hommes." The latter term doubtless requires an explanation to be understood by American readers, as no similar institution exists in the United States of which I am aware. The "conseil des prud'hommes" has had an uninterrupted existence

in this city since the period of the Roman occupation. It was undisturbed by the Revolution and dispenses justice to-day in very much the same way as during the time of the Roman emperors. The "conseil" is an institution essentially municipal, and has for its object the conciliation of differences which arise between employers and superintendents, foremen, workmen, and apprentices, pronouncing upon such differences when conciliation proves ineffectual. It judges all complaints relative to contracts with apprentices, and, in default of express stipulation, regulates the amount of indemnity due in case of rupture of such contracts. Complaints relative to the accounts of employers, trade-marks, and patents are also considered by this court. The "conseil" is composed of employers and workingmen in equal numbers, with a president and vice-president, the members thereof being elected by their fellow employers and employees. The parties to complaints presented to the "conseil des prud'hommes" plead themselves, without the intervention of attorneys. Until within a short time before the Revolution, the "prud'hommes" of Marseilles wore mantles and small velvet caps, and on ceremonious occasions gorgeous corsets, antique slippers, huge white ruffs, and short mantles, and were followed by companies of the tradesmen under arms. The history of this venerable institution is most interesting, and the judgments rendered are highly respected and very rarely reversed by the superior courts.

In the council of labor about to be organized in this city, there will be a very considerable representation from the various boards of prud'hommes, but the preponderating majority will be members elected from the syndicates. The syndicates of employers must have at least ten members to cast one vote, and these syndicates elect employing councilors. Syndicates of employees must have at least twenty-five members to have one vote in selecting employee councilors. It follows that every French industry or commerce desiring to be represented in the council must become syndicated under certain accepted regulations.

The council will be divided into six sections, for the consideration of matters coming under the following general heads:

(1) Wholesale alimentation, mechanical industries allied thereto (including seed crushing), and chemical industries.

(2) Retail alimentation and small allied industries.

(3) Transportation and manipulation of freight.

(4) Building, lumber, and iron trades.

(5) Textile industries.

(6) Mechanical arts, such as the manufacture of jewelry and scientific instruments, designing, lithographing, printing, and decorative arts.

The elections for membership in the first council will doubtless be held in the near future. Interest in the matter is very considerable and extends not only to the labor unions, but to seventy-five organizations of employers. It will be a number of months before the council will have an opportunity to begin its public services.

ROBERT P. SKINNER,

MARSEILLES, *December 24, 1900.* *Consul.*

FRENCH TAX ON ALCOHOL, WINES, ETC.

Consul Skinner sends the following from Marseilles, under date of January 1, 1901:

After fifteen years of agitation, a new law became effective in France on January 1, having for its object the promotion of temperance. The Government measure is wholly financial. It reduces the tax upon wine, cider, and beer, classified as "hygienic beverages," and at the same time increases the tax upon alcohol. The work has been seconded by local authorities, and in this city the hygienic beverages will benefit by a total reduction of $1.30 per hectoliter of 26.41 gallons, and alcohol will pay 220 francs per hectoliter, as against 156 francs, an increase of $12.35. As the wine crop has been abundant, it is expected that the law will enable the consumer to secure a very substantial reduction in the price of the common red wine served in all French families, and, by making the artificial alcoholic preparations more expensive, discourage their use.

During the fifteen years mentioned, a steady increase of alcoholism has been noted among a people naturally temperate and even now less afflicted with drunkenness in its brutal forms than most nations. The beginning of this condition is attributed to the phylloxera, which suddenly swept off the French vines, produced a scarcity of common wine, and caused the introduction of a large number of cheap substitutes, all of them heavily alcoholic and generically termed "aperitives."

Mr. Skinner adds that the professional classes of France have waged an active campaign against these "aperitives" on the ground that they are the main cause of the increase of intemperance, and have urged the substitution of wine, upon the theory that this will tend to reduce the immoderate use of alcohol. The cultivation of the vineyards has again made pure wine plentiful, and the working classes are advised to use it freely, to the exclusion of alcoholic beverages.

MARSEILLES COTTON-OIL TRADE.

The statistics for the year 1900 have just been made up and show a distinct loss in the quantity of American cotton oil imported into Marseilles—which continues to be its most important foreign market—as compared with the three years previous, although the average price shows an increase amounting to 14.23 francs ($2.75) per 100 kilograms (220.46 pounds). This diminution in the quantity imported seems to have some relation to the increase of arrivals of oleaginous seeds which are crushed by local manufacturers. The total imports of oleaginous seeds have increased as follows during the past four years:

	Tons.
1897	260,000
1898	309,000
1899	327,000
1900	336,452

The necessary result of this increase in the amount of local oil manufactured has been to produce a downward tendency in prices for all oils, especially peanut oil, which last week sold for as little as 50 francs ($9.65) per 220.46 pounds. Since the 1st of January, c. i. f. terms for off-grade cotton oils have been from 52 francs ($10.03), and for prime summer yellow from 54 francs ($10.42), closing strong at the latter rates.

During the year 1900, the price of cotton oil fluctuated in Marseilles from 58 francs ($11.19) in January to 63 francs ($12.15) in November, the year closing at 56 francs ($10.80), and being at the present moment still weaker. The following is the statistical situation during a series of years:

Stock in warehouse on December 31 during last ten years.

Year.	American oil.	English oil.
	Barrels.	*Barrels.*
1891	6,000	850
1892	4,750	800
1893	650	700
1894	2,000	300
1895	14,000	200
1896	10,000	1,400
1897	23,000	1,500
1898	43,000	.....
1899	15,000	2,000
1900	4,700	200

Yearly average prices per 220.46 pounds for last ten years.

Year.	Price.	Year.	Price.
1891	$10.90	1896	$8.35
1892	10.23	1897	8.00
1893	13.69	1898	7.92
1894	11.00	1899	8.60
1895	9.28	1900	11.36

Annual imports during last ten years.

Year.	United States.	England.	All other countries.	Total
	Barrels.	*Barrels.*	*Barrels.*	*Barrels.*
1891	56,302	17,759	.....	74,061
1892	36,798	20,413	.....	57,211
1893	13,360	40,123	517	54,000
1894	12,530	26,530	707	39,767
1895	59,528	5,632	258	65,418
1896	112,627	11,109	126	123,862
1897	237,898	22,808	834	261,540
1898	287,739	5,150	965	293,854
1899	269,106	7,831	1,311	279,248
1900	185,515	9,260	716	195,491

ROBERT P. SKINNER,
Consul.

MARSEILLES, *January 12, 1901.*

IMPORTATION OF COFFEE INTO FRANCE.

Consul Skinner, of Marseilles, under date of January 5, 1901, forwards to the Department a copy of a French decree published in the Journal Officiel of December 27, 1900. By virtue of this decree, says the consul, the minimum tariff tax will be applicable provisionally until June 30, 1901, upon coffees originating in various ports of the world. This is of special interest as it affects the United States, Cuba, Porto Rico, and the Philippine Islands. The minimum duty upon green coffees, he adds, is $30 per 220 pounds and the maximum rate $57.90 per 220 pounds.

The following is a translation of the salient features:

ARTICLE 1. The taxes provided under the head of minimum rates of duty will continue to be applicable provisionally until June 30, 1901, to the commodities comprehended in article 1 of the laws of February 24 and July 17, 1900 (green coffees), originating from the following territories:

Portugal.

The colonies, possessions, and protectorates controlled by Germany, Great Britain, Denmark, Spain, Holland, and Portugal.

The United States of America.

The five republics of Central America.

Cuba and Porto Rico.

Ecuador, Peru, and Chile.
Liberia and the Kongo Free State.
Ethiopia.
Korea, China, and Siam.
Philippine Islands.

ART. 2. The said commodities originating in countries not comprised in the above enumeration and received in the French magazines from January 24 to August 30, 1900, will be admissible under the minimum rate of duty until June 30, 1901.

BURRING OF WOOL IN FRANCE.

Mr. Jules Morel, of Roubaix, has just patented a new system of burring wool which is said to extract all burrs, leaving the wool perfectly pure for all trade purposes.

The process has been in use in Roubaix for the past three years. The wool tufts are opened so that the burr is extracted without breaking. The first operation separates the burr from the fiber and the second expels it whole. The close setting of the teeth expels not only burrs, but motes, which are the frequent cause of difficulty in dyeing. The clean state of the wool, the fiber of which is unimpaired, allows the processes preliminary to combing, as well as the process of combing, to be effected more easily.

The gain is figured at 4 or 5 cents on each pound. The production is greater and the noils cleaner. When noils are carbonized, they require less acid, leaving a product superior for spinning, weaving, and dyeing purposes.

The system is in wide use here, and important spinners testify to the excellence of the burring, which leaves a long staple of great strength.

The pamphlet which I forward gives illustrations of the machine, with full explanations concerning its operation.*

W. P. ATWELL,
Consul.

ROUBAIX, *January 9, 1901.*

RIBBON TRADE AT ST. ETIENNE.

The following is taken from a report of the "Permanent Commission on Custom Duties:"

In 1899, the production of ribbons in the district of St. Etienne was equal to the average of the last five years, or about 88,400,000 francs ($17,061,200). France exports nearly half of the ribbons she makes. St. Etienne still maintains its position on the foreign (European) markets, but the industry is passing through a crisis. The mechanical loom is taking away part of the work of the weavers, which will

* Filed for reference in the Bureau of Foreign Commerce.

cause St. Etienne to lose some of its facility for accepting orders for ribbons of good quality to be delivered at short notice. But, on the other hand, the extension of mechanical weaving will lower the prices so as to favor the production of cheap articles, which are more in demand.

The most serious point is that a St. Etienne commission man can not accept a large order for quick manufacture and delivery because he has no assurance that he can control a sufficient number of looms. The remedy for this condition of affairs is evidently the construction of large factories, equipped with the best labor-saving machinery, which would be entirely under the control of one responsible head. With old-fashioned looms scattered all over three Departments, each weaver being his own master, the trade is so seriously hampered that there is danger that St. Etienne will cease to be the great ribbon center of France, the position she has so long held.

The ribbon manufacturers of St. Etienne are not able to compete successfully with their Swiss, German, and American rivals. It is hard to convince the weaver who has a loom in his house that there is no longer work for him. He insists that he can do quite as well as his grandfather did; and so he can, but the exigencies of the trade call for more modern and economical methods. The employers insist that these old machines must be abandoned and that skilled workmen must obtain employment in the large factories. To this the weavers offer every sort of resistance.

A short time ago, one of the most important commission men in Lyons and St. Etienne told me that the day is not far off when American manufacturers will sell silk piece goods and ribbons in Paris and London, not only at lower prices, but of better quality, than France is now able to produce.

Just as surely as American iron products—bridges, machinery, etc.—have found a permanent market in Europe, so will American silks and other textile goods; and the time has almost arrived.

HILARY S. BRUNOT,

ST. ETIENNE, *January 10, 1901.* *Consul.*

GERMAN-DUTCH CABLE TO THE EAST.

The Deutsche Wochenzeitung in den Niederlanden states that Germany and the Netherlands are planning to lay a new cable to connect with the Dutch East Indies and make them independent of the British cable syndicate. It is proposed to have the main line go to Shanghai, with branch cables from there north to Kyao-chau, east to Japan and America, and south to the Indian Archipelago. The southern line will have its first station on the Bismarck and

Caroline Islands, and from there will go west in a roundabout way through the Dutch dominions to the North Natuna Islands, without touching any of the British possessions. The North Natuna Islands will form the terminus of the line.

The Netherlands will construct the following three cables:

(1) From the Natuna Islands to Pontianac, Billiton, Banka, Palembang, in connection with the land line, which will traverse the country by way of Kalianda, through the Sunda Straits, to Batavia.

(2) From Palembang direct to Batavia.

(3) From Macassar to Ambon, whence Germany will continue the cable to German New Guinea, to connect with the main line. It is understood that Germany will commence this work in the near future.

RICHARD GUENTHER,
Consul-General.

FRANKFORT, *January 8, 1901.*

AMERICAN MACHINERY FOR DUTCH INDIA.

I transmit herewith a communication from the Koloniale Bank, of Amsterdam, relative to American sugar machinery for Sœrabaya, Dutch India, which I hope will receive the immediate attention of our manufacturers:

AMSTERDAM, *January 17, 1901.*

FRANK D. HILL, Esquire,
Consul of the United States of America.

SIR: Our chief agent at Sœrabaya, Java, would like to be informed about prices and terms of first-rate American sugar machinery, and of A1 American tramway engines and tramway material.

May we solicit information regarding names and addresses of prominent works, in order to address them on the subject?

Thanking you in anticipation and awaiting the favor of your reply, we are, sir, yours, faithfully,

KOLONIALE BANK,
HUDIG CALKOEN.

Sœrabaya is a city of 142,980 inhabitants (of whom 6,988 are Europeans). It is two days by rail from Batavia on the railway which extends to Panarœkan.

With respect to transportation, Consul Everett says in Commercial Relations, 1899:

Transportation throughout Dutch India is very good, though rather expensive. The islands and ports are all connected by a line of steamers subsidized by the Government. The cheapest way of shipping from the United States to this colony is via Liverpool or London, thence direct to Batavia. I do not recommend shipping via Singapore or Holland, as the cost of transshipment is apt to be greater. Via Singapore, too, one must always allow for a good percentage of loss. From San Francisco and the Pacific coast, goods must be shipped to Hongkong; thence

to Batavia, Samarang, or Sœrabaya. The time of shipment for freight between New York and Java or San Francisco and Java is about two months at the outside, allowing liberally for delays in transshipment.

From the Netherlands there is a fortnightly service to Java by both the Nederland Steamship Company and the Rotterdamsche Lloyd; voyages about a month in duration.

As to the Koloniale Bank, which requests data, I may say that the institution has a sound reputation and a capital of 10,000,000 guilders (about $4,020,000).

I trust that American manufacturers will take this opportunity to secure a further foothold in the Java importing business. Java's exports to us, mainly sugar, amounted last year to about $27,000,000, of which some $15,000,000 was from the port of Sœrabaya.

In this connection, I would note that the engineer Alpherts, chief of the technical bureau of the Department of Colonies, and Mr. Weys, engineer of public works in Dutch East Indies, left some time ago for the United States to make an investigation in the factory of the firm of Hood & Co., of Philadelphia, who have made the lowest bid—292,000 florins ($117,384)—for furnishing materials for the water supply of Sœrabaya.

Duties on iron and steel products are levied in the Dutch East Indies at 10 per cent ad valorem, instead of 5 per cent, as per the tariff for the Netherlands.

FRANK D. HILL,

AMSTERDAM, *January 18, 1901.* *Consul.*

QUININE AUCTION IN JAVA.

Under date of December 4, 1900, Consul Rairden, of Batavia, reports that the seventh public auction sale of quinine was held in that city on the 28th day of November, 1900, the following prices being realized:

(1) Editio II, consisting of 2,721.6 kilograms (6,000 pounds) of sulphate of quinine: Sold in lots of 2 cases containing 4 tins of 22.68 kilograms (50 pounds) for 21.85 and 22.05 florins ($8.78 and $8.86) per kilogram (2.2 pounds).

(2) Editio II, consisting of about 500 kilograms (1,102 pounds) of sulphate of quinine: Sold in lots of not less than 22.68 kilograms (50 pounds) and not more than 25 kilograms (55 pounds), packing at purchaser's option, for 21.85 and 22.05 florins ($8.78 and $8.86) per kilogram. The average price for the above lots (21.95 florins=$8.82 per kilogram) is equivalent to the unit price of 0.875 florin (35.2 cents) for the bark at Amsterdam.

(3) Editio II, consisting of about 240 kilograms (529 pounds) of muriatic quinine, to suit the demand, in lots of not less than 11.34 kilograms (25 pounds) and not more than 12 kilograms (26.4 pounds), packing at purchaser's option: Three lots were sold for 32.55 florins ($13.08) per kilogram, and others, not bringing the limit, were not sold.

(4) Editio III, consisting of 120 kilograms (264.5 pounds) of sulphate of quinine (apothecary's quinine) in lots of 1 case of 24 tins, each of 1 kilogram (2.2 pounds): No bids were had for this lot.

The next sale, consisting of about 3,200 kilograms (7,054.7 pounds) of sulphate of quinine, will be held on the 19th day of December, 1900.

COTTON CROP OF INDIA.

From the third general memorandum on the cotton crop of India for the season 1900–1901, made by the director-general of statistics for the government of British India, the following report is compiled:

In Bombay, the important late cotton crop, grown largely in Guzerat, has been injuriously affected by the holding off of rains toward the end of the season, and its prospects are not as good as might be desired; but the actual extent to which the crop has been affected can not as yet be estimated. The early crop of the Deccan is materially below the average. In Madras, also, the crop in Deccan districts has sustained loss from the same cause; but the reduction in yield below the average is not important. Elsewhere the crop has thriven and is giving a yield much in excess of the average in northern India, especially in the Central Provinces and Berar. The crop in the Central Provinces is, indeed, the finest ever gathered there, and the cultivator who has been impoverished by a succession of bad seasons is fortunate in being able to sell an excellent crop at the relatively high prices which now prevail.

So far as an estimate may be formed at present, the area and yield of the present season compare as follows with the finally reported results of the preceding four years; but the estimate is defective, and the final figures will probably considerably exceed it:

Year.	Area.	Yield.
	Acres.	*Bales.**
1896–97	14,945,650	1,898,301
1897–98	14,243,972	2,132,130
1898–99	14,621,066	317,955
1899–1900	11,805,133	760,646
1900–1901	13,325,487	1,442,384

*400 pounds each.

For the purpose of this report, it is not necessary to go into details in regard to the different districts, as the general result is all that will interest the cotton growers in the United States.

R. F. PATTERSON,
Consul-General.

CALCUTTA, *January 10, 1901.*

FLOUR IN CHINA.

I submit herewith a tabular statement covering the imports of flour, by ports, into China during the years 1897 and 1899, viz, 1,123,879 haikwan taels ($809,192.88) in the former year and 2,894,214 haikwan taels ($2,054,891.94) in the latter year, showing an increase of 1,770,335 taels ($1,256,937.85)—one of the marvels in oriental trade.

Flour imports from foreign countries and from Hongkong.

Port.	1897.		1899.		Increase.	
	Hk. taels.		*Hk. taels.*		*Hk. taels.*	
Niuchwang	18	$12.96	91,204	$64,754.84	91,186	$64,741.88
Chefoo	4,452	3,205.44	468,230	332,443.30	463,778	339,239.86
Shanghai	173,315	124,786.80	225,845	160,349.95	52,530	35,563.15
Ningpo	2,140	1,540.80	7,205	5,115.55	5,065	3,574.75
Fuchau	30,573	22,012.56	159,275	113,085.25	128,702	91,072.69
Amoy	209,726	151,002.72	576,316	409,184.36	366,590	258,181.64
Swatow	48,424	34,765.28	343,478	244,309.38	295,054	209,544.10
Wenchow	2,557	1,841.04	14,100	10,011.00	11,543	8,169.96
Canton	465,788	335,367.36	735,061	521,463.31	269,273	186,095.95
Kowloon	59,740	43,012.80	75,067	53,297.57	15,327	10,284.77
Lappa	63,816	45,947.52	79,225	56,249.75	15,409	10,302.23
Kiungchow	44,327	31,915.44	81,804	58,080.84	37,477	26,165.40
Pakhoi	19,003	13,682.16	37,404	26,556.84	18,401	12,874.68
Total	1,123,879	809,192.88	2,894,214	2,054,891.94	1,770,335	1,254,699.06

The most encouraging feature to the importer in the foregoing table is not alone in the enormous increase of total imports, but in the fact of the very large increase at each and every port. It is a most significant and gratifying characteristic of the trade that wherever flour has been introduced there has been such rapid increase in the demand and in the consumption as to give an assurance of a continued and growing market therefor in all sections of China where the cost of transportation does not bar its use.

CHINESE APPETITE FOR FLOUR.

Flour evidently gratifies the Chinese appetite by satisfying the desire for variety in food, at the same time coming within their ability to buy.

A careful observation of the Chinese method of living, their system of preparation of food, and habits of consumption shows conclusively that flour is especially well adapted thereto, and that whenever it can be brought within their purchasing power it is sure of permanent and increasing use. Its use in so many different ways makes it especially desirable. With the development of China will come improved conditions of the Chinese and a demand for better and more diversified food. Progress in China means a wonderful increase in the consumption of wheat flour.

CHINESE USES OF FLOUR.

In all the Chinese cities, a very large percentage of the population lives in a sort of hand-to-mouth fashion, buying food from restaurants. Hot water is sold from stands by people who make a business of providing it. The great necessity for economy in fuel seems to be the primary cause of this mode of living. Restaurants are the great consumers of foreign flour.

Throughout central and southern China very little baked bread is used, and the flour is consumed in the form of dough, vermicelli, or dumplings filled with chopped meat, or meat and vegetables or fruit.

The flour is made into dough and worked into a leathery form by a man operating a bamboo fastened at one end. The worker sits on the other end of the bamboo and presses and works the dough until it is quite tough; it is then pressed into thin sheets and cut into strings, boiled, and thus eaten, or made into dumplings and then steamed and eaten. In nearly every case it is eaten while hot. This foreign flour is also used quite extensively in cakes and Chinese confections of various kinds.

In a great many of these restaurants, the native flour made from native wheat is used for the inside of the dumpling and dough bread and the finer and whiter flour is used as a covering.

The Chinese appetite seems to demand boiled or steamed food rather than baked; hence, very little foreign flour is baked into bread for Chinese consumption.

FLOUR VERSUS RICE.

This foreign flour does not come into actual competition with rice and can not altogether take its place with the great rice-eating population of China, but it answers the purpose of furnishing a cheap variety to the food of those able to buy it. The coolie, the merchant, and the mechanic in all the treaty ports of China get better wages than those in the interior, are able to add a little

variety to their food, and are becoming consumers of foreign flour. The rate of wages in all the treaty ports has been gradually increasing for several years.

GRAIN GROWING IN CHINA.

It will be observed from the foregoing table that the great consumption of the foreign flour is in the rice-growing section of China, where rice constitutes the staple food. The wheat flour goes into this section as an addition to, and not as a substitute for, the rice diet.

In the northern part of China, grain food other than rice is the staple. Millet, corn, wheat, and buckwheat form the main food grains. Baked corn bread is a common article of diet in this section; and wheat flour, grown and ground by the natives, is quite extensively used.

Wheat is grown to some extent in nearly every section of China. It is grown more extensively throughout the northern and western than in the central and southern portions, and in the north and west it is generally used for food. In these sections, the grain is ground in small stone mills operated by hand or animal power and in some places by water power. Throughout the north, each family owns its own mill and grinds its own flour. A small stone mill is a part of each farmer's outfit.

The tall millet, growing to a height of 20 feet in some places, does not produce much food per acre, perhaps not more than a fourth as much as wheat; but the stalk is a necessity as a fuel, and it is grown largely for that purpose. The grain is used for animal as well as for human food.

If the Chinese get to using coal, instead of vegetable growths, for fuel, this great area of country, now given up to tall millet, will no doubt be given over to wheat growing; and, as this section produces a good quality of wheat, it may be within the possibilities that China will produce the grain to supply most of her flour.

It is a very common misunderstanding of the agricultural and horticultural resources of China to believe that their full possibilities of food production have been reached. Many sections can be largely increased by irrigation, others by substituting food crops in place of fuel crops, and much idle land can be used for fruits. Mineral fertilizers will also increase the production.

Although agriculture is more highly developed than other industries, its full capabilities in food production are far from being realized. It is conceded that the northern part of China produces the best wheat, and it is claimed that it is as good as the average raised in the United States.

TRANSPORTATION OF GRAIN.

The vast water ways (rivers, creeks, and canals), covering such a large area, reaching in many sections almost every 40 acres of land, with the cheap labor engaged in transportation, make the carrying of grain an insignificant factor in its cost at the mill, and provide every means for its cheap distribution.

PLANTING, HARVESTING, AND THRASHING.

The greater part of the wheat is winter wheat planted in the fall. It is not sown in large tracts, as in the United States, but planted in small lots of a fraction of an acre. It is in many cases planted by dropping about three grains in a hole and putting a few ashes in each hill. It is hoed and weeds are pulled out by hand. When ripe, it is cut close to the ground or pulled out by the roots.

The thrashing is done by flails on the ground. The grain is gathered up, with a large percentage of dirt, and sold without being cleaned, so that the dirt adds much to the quantity. Another method of thrashing is to whip the grain over a row of sticks placed on a box.

The wheat is not cleaned before it reaches the mill, and when ground in the native mills much of the dirt is ground into the flour, so that it is gritty. All native mills are of small capacity, made of stone rollers over a stone base, and the product is a coarse, dark, and dirty flour. These mills are generally operated by animals, such as are used in that particular section of China.

There are no good modern plows or agricultural machinery anywhere in China and animals are little used in proportion to the work done. Hand labor is employed in growing, harvesting, thrashing, and transporting grain to market.

WHEAT PRICES AND WHEAT PESTS.

The usual price paid for wheat delivered at the mills is $2.20 Mexican ($1.10 gold) for 133⅓ pounds.

A large amount of the wheat is found to be injured by weevil, or something like it, that eats out the inner part of the grain and leaves the hull.

FLOUR MILLS IN CHINA.

There have been three modern flour mills constructed in China—one at Tientsin, which was recently destroyed by the Boxers, and two at Shanghai. One of the Shanghai mills is furnished with English machinery and has a capacity of 250 barrels per day. This mill is now in operation.

AN AMERICAN FLOUR MILL.

The increasing production of wheat in this part of China and the corresponding rise of a new industry is undoubtedly one of the signs of the advance of western ideas among the Chinese people. In the center of the great rice-growing region, it is not a little astonishing to find that Chinese enterprise has seized so promptly on wheat as an article of food. The idea of the promoters of the flourishing and beautifully constructed Fou Foong flour mill, beyond the end of the Markham road, is, of course, to supply the foreign communities of northern China with flour which fully equals in quality the imported article. The Fou Foong is the first modern American flour mill in China and has been fitted by the Edward P. Allis Company, of Milwaukee, under the personal supervision of that company's representative, Mr. F. G. Morse, of Minneapolis. Its location is on the Shanghai bank of the Soochow Creek. It is a four-story stone and brick building of very pleasing exterior and thoroughly American in appearance and style. The main building is 72 feet long and 40 feet wide. A separate house, 40 by 40 feet, with two large godowns and a handsome, commodious structure alongside for the manager and head miller, completes the building equipment. The appliances for the numerous processes through which the wheat passes until it emerges in snowy flour are of the most modern description.

The mill has 8,000 bushels capacity, and can easily turn out 1,200 sacks of flour of 50 pounds per sack per day.

The power plant consists of a magnificent Corliss engine (Reynolds patent) of 200 horsepower, made by the Edward P. Allis Company, steam being supplied by two large tubular boilers, one large belt condenser, one duplex boiler feed pump. Lighting for night work is furnished by a Sprague electric dynamo.

The entire mill was erected by Mr. Morse with only unskilled coolie labor to help him. The flour turned out is of splendid quality, and we have not seen better or whiter bread than that made from the "Fou Foong" flour.

This mill turns 75 per cent of the wheat into flour; 84 per cent of this is first-grade patent flour and 11 per cent baker's grade. The grain used is red winter wheat.

The bran is sold for $20 Mexican ($10 in United States currency) per ton, and goes to Japan to be used as a fertilizer.

WAGES, CAPITAL, MANAGEMENT, ETC.

Common help is paid from $7 to $10 Mexican ($3.50 to $5 United States currency) per month; engineers are paid from $15 to $30 ($7.50 to $15 United States currency).

The company is entirely Chinese, with a fully paid-up capital of 200,000 taels ($134,000), almost all of which has been expended upon plant and buildings.

The Chinese are usually quite ready to furnish capital for enterprises that show an opportunity for profitable investment, and the money for the building and equipment of these mills was supplied wholly by Chinese.

The company is so well pleased with this investment that it is planning the erection of permanent warehouses for storing grain at various points in China. It has also in contemplation extensive additions to this plant with a view of increasing its capacity to 1,200 barrels per day.

CHINESE NEPOTISM.

There are two strong Chinese characteristics that are seriously detrimental to the successful management of large industrial institutions exclusively by Chinese. The first and most important is the family or clan social and industrial system of China.

Every Chinese manager of any institution employing labor must provide employment for his father, uncle, grandfather, innumerable cousins, and entire clan relationship. These people do not work, are not expected to work, but are pensioners; and their great number makes a burden so heavy that the enterprise becomes unprofitable. This has been the cause of many institutions of a foreign character under exclusively Chinese management being failures, and is largely accountable for the extra cost of products of all factories, arsenals, etc., operated by the Chinese authorities.

There is no country where so many unnecessary people are clustered about industrial works, drawing pay and giving no economic value in return, as in China. The main thought in Chinese economy seems to be to find a place for a man to get wages, however small, regardless of whether he earns it or not. The idea that a man should be employed on the basis of his earning power and capacity is unknown.

The other characteristic is lack of organizing and directing power of the Chinese mind applied to industry. There is the most complete liberty and democracy of management of all industrial affairs on the part of the Chinese, with no organized systematic direction.

In moving heavy weights, there is no overseer, no manager, but each coolie has a say, and a stranger passing along can give direction without creating offense. Their entire industrial life has been so completely confined to hand labor and single-handed effort that the organizing and directing powers of the mind have not been brought into action.

These two characteristics make it absolutely essential that foreigners must inaugurate, develop, and direct for a long time to come

the modern industrial affairs of China, even when resting upon Chinese capital. The purely commercial side of the growing industries of China will be handled better by the Chinese themselves. The mechanical, the economic, the distinctly industrial part of all progressive movements in China must be under the direction of foreigners.

OUTLOOK FOR AMERICAN FLOUR AND MILLING MACHINERY.

The consumption of flour in China, then, that is growing so fast, indicates a good future market for American flour and flouring-mill machinery, as well as employment for skilled Americans in the construction and operation of flour mills.

The conservative character of the people of China when it comes to a change in methods of industry is so well established that it seems perfectly safe to predict that the demand for flour for many years to come will be far ahead of the local production. The ability of the United States to place flour cheaply in all the great coast cities gives assurance of an extensive and permanent trade between our country and the Orient.

HENRY B. MILLER,
Consul at Chungking.

SHANGHAI, *December 29, 1900.*

NEW PORT IN CHINA.

Consul Wilcox sends from Hankau, December 14, 1900, a dispatch from Viceroy Chang regarding the land that is to be used for the terminus of the Hankau-Canton Railway and for business purposes. It is to be called the "self-opened port" and is located on the south side of the river, opposite Hankau.

The viceroy, it seems, requested the consul to recommend an American engineer to lay out the city, superintend the bunding on the river, etc. The latter has written to Shanghai to see if a suitable engineer can be obtained, as the amount of work would not justify bringing one from the United States.

The viceroy's dispatch designates the riverside, within or beyond the distance of 10 li* from the north gate at Wuchang, as the landing place of the Hankau railroad. The regulations are given as follows:

THE FIVE REGULATIONS OF THE "SELF-OPENED BUSINESS PLACE," 10 LI OR MORE OUTSIDE OF THE NORTH GATE.

I.—Having received an edict to open a "self-opened business place" 10 li or more outside of Wuchung, I (the viceroy) have deputed officers to select a convenient place and establish boundaries. Having done this, they are to prepare a map, with explanations, which is to be sent to the consuls of all nations that they may notify merchants of their nations.

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*1 li=2,115 feet.

II.—All lands included in the specified boundaries, both public and private, are to be under the control of the "riverside office," which I have established, which office will select sites, settle prices, arrange rentals, give certificates, etc. All consuls will be notified when the map is completed, that they may inform the merchants of the date fixed when they may be present at the riverside office and offer bids for rental before the official. To avoid trouble, neither Chinese nor foreign merchants will be allowed to make private arrangement with citizens in renting this property. Merchants renting land within the limits belonging to citizens must pay the rental to the office. The official in charge will decide what part of this to give the owner, and the balance will be reserved in the office for local use in making a bund, filling in, excavating the inner ditch, repairing the dike, making landings and carriage roads, and establishing a police force; and thus the place will prosper, and both Chinese and foreign merchants will be benefited.

III.—Inasmuch as this is a "self-established business place" outside of Wuchang, merchants of all nations are to live together without discrimination, all will be treated in the same way, and it will not be necessary for each nation to have its particular limits.

IV.—The rules for the government of the "self-opened business place" outside of Wuchang and for the protection of the merchants will be established by the viceroy in a new set of regulations and a day proclaimed for them to take effect. The officials will establish a labor office and a detective office, the expenses for which will be met by just and proportionate taxation of each renter.

V.—The bidding for the rental of land, limit on which the rental expires, paying of the rent money, and all minute rules will be subject to a separate set of regulations, which will be partly taken from the "Yo-chow" regulations, as thought best. When this is done, the consuls of all the nations will be notified.

BICYCLES IN SIAM.

The first consignment of safety bicycles was brought to Bangkok by Dr. P. T. Carrington, an American dentist, in 1896. Previous to that time, one or two of these wheels had been imported for private use. There are now in this city between two thousand five hundred and three thousand bicycles. They are to be seen in all parts of the city and are used by all classes. The King of Siam rides an American bicycle of the latest and most improved model, and it is by no means an uncommon thing to see the ministers of the Government coming and going to their duties and even to public functions on their wheels.

The Minister of the Interior has systematically encouraged the use of the wheel, believing that its employment will lead to better roads in the city and in the country towns. He is the head of a large bicycle club that numbers upwards of four hundred members. Among the members are many of the princes and Government officials, and, in the favorable seasons of the year, this club indulges in long runs to the remote parts of the city. These runs are generally held during the cooler portion of the night and wind up in a banquet well toward the morning.

The crowning endeavor of this club was a grand bicycle pageant given some months ago in the presence of the King and Queen of Siam and participated in by nearly every prince of the country. The entire affair was a great success. Perhaps I can in no way better show the popularity of the wheel in Siam than by quoting from the local papers at the time.

THE BICYCLE FÊTE.

* * * * * * *

Taken simply as a parade of cyclists in fancy dress with decorated machines—a kind of fête that is common enough both in Europe and America—it may be doubted if any one of those present had ever seen anything better, or indeed anything that equaled it. There were between two and three hundred cyclists in the procession, all in elaborate fancy dress, on which a wealth of ingenuity had been spent. First in the programme came the races, with all the records for Siam to make; and they were as successful as they could have been expected to be where there is no race track. After the races came the procession round the Premane Ground, when the spectators had a chance of trying to make out who was who. Their Majesties, it should have been said, were early on the ground and took the greatest interest in the whole proceedings.

The judging over and the prizes presented, a mimic "battle of flowers" began, and was entered into with good spirit. * * * This fête was, of course, a thing apart; but, considering the interest that the Siamese are taking in cycling, there can be no doubt that Bangkok should be able to boast a cinder track—a place where race meeting and occasional fancy-dress parade could be held.

This city is most favorably adapted to the use of bicycles, the streets being level and fairly well paved in all directions. This is especially true of the streets within the walled city and between the old and new palaces, a distance of some 3 miles or more. Any pleasant afternoon, when the King or Queen takes the favorite ride to the new palace at Dusit Park, several members of the royal household—ladies, gentlemen, and children—may be seen accompanying the carriage on their wheels.

The bicycle has come to Siam to stay. It is finding its way into the outlying cities and villages. And as a medium of civilization, it is bringing with it better roads and better means of communication. The wet season does not witness the enthusiasm of six months ago, but dealers report a steady sale. The American wheel is by far the favorite in Siam, representing between 75 and 85 per cent of all the bicycles used in the Kingdom.

The largest importers of American wheels in the city are His Royal Highness Prince Nara, the American Importing Company, Smith, Fertsch & Co., Siam American Trading Company, the Siam Electricity Company, and Seekak Dispensary.

HAMILTON KING,
Consul-General.

BANGKOK, *November 30, 1900.*

RICE-MILLING MACHINERY IN SIAM.

The chief staple of Siam is rice. The trade reports for 1899 show that the value of this product exported during that year was $22,834,160 Mexican, and the value of the output is rapidly increasing every year. Through the interest of the Government and of private enterprise in irrigation, large tracts of jungle have been brought under cultivation during the last ten years, and plans are under consideration by which still greater areas will be converted into productive fields. These plans cover a period of many years. The Siamese are peculiarly an agricultural people, and the trade in this cereal is bound to increase largely as the years go by.

All rice for the foreign market is prepared at Bangkok. In this city are twenty-six steam rice mills which have well-developed plants and many smaller ones which use more or less machinery. There are now in process of construction three mills, among which is the largest mill in Siam. Two others, just destroyed by fire, will be rebuilt next year. Taking into consideration the natural growth of the rice industry and judging by the experience of the last four years of the destruction caused by fire in a city where there is no fire protection, it is safe to say that the activity in the rebuilding of old and the establishment of new plants will increase rather than diminish year by year.

At present, the entire trade in rice-milling machinery is handled by a single firm—Douglas & Grant, Kirkcaldy, Scotland. This is due simply to the fact that this firm early became known to the Bangkok trade, and, no competitors having come into the field, the trade has drifted into its hands. Of the twenty-six steam rice mills in Bangkok, four belong to Europeans—two British (belonging to one firm), one German, and the fourth nominally registered as French. All others are either owned or managed by Chinese. Six of these Chinese firms, ranking among the largest and most prosperous, are British (that is, they are owned by Chinese who were born either in Hongkong or the Straits Settlements), one is French, and two are Siamese. The proprietors of the remaining thirteen are Chinese, under Siamese protection. It is thus seen that the direction this trade has taken is in no way due to race or national tendencies. On the contrary, an acquaintance with the men under whose management and supervision these mills are operated compels one to believe that they desire the latest improvements and the best machinery wherever it is to be found, and that they are ready to buy in that market where they can get the best for the money expended.

Siam knows nothing of American rice milling; of the special machinery by which we get extraordinary separation; of the peculiar means by which a high degree of polish or extra finish is effected; or of the machinery we use in the more common processes. This is a growing trade and it is worth an intelligent effort on the part of our manufacturers to secure a share of it. Siam is in the midst of a vast rice-growing area, and through her trade an introduction to still larger fields may become possible.

HAMILTON KING,
Consul-General.

BANGKOK, *December 15, 1900.*

NOTES.

The Baltic-White Sea Canal.*—Consul Winter transmits the following from Annaberg, December 27, 1900:

Hand in hand with the great railway enterprises nearing completion in the Russian Empire, the digging of gigantic canals is projected. In order to more rapidly develop the vast territory of Archangel, a water way of sufficient depth to admit vessels of ocean tonnage is being planned to connect the Baltic with the White Sea. The advantages of such a canal are manifold. The products of the fisheries of the Arctic Ocean may then be sent with ease to the markets of northern Europe, and the freight rates from the great grain-producing districts of the head waters of the Volga will be greatly reduced. The canal will also be of great advantage to the Russian navy in time of war. The maintenance of such a water way after completion, however, will be attended with many difficulties. For many months, it will be practically ice blocked, while the dense fogs which prevail in those regions during the fall of each year will render navigation very tedious.

Tenders for Iron Pipes for Java.—Consul Hill, of Amsterdam, under date of February 12, 1901, transmits specification and conditions for the supply of cast-iron pipes for the waterworks of Sœrabaya,† as follows:

TENDERS FOR THE SUPPLY OF ABOUT 3,600 TONS OF CAST-IRON SOCKET PIPES.

The technical bureau of the Netherlands colonial office is prepared to receive tenders from iron foundries for the supply of about 3,600 tons asphalt-coated cast-iron socket pipes (probably about 7,800 tons more will be required in the course of 1901 and 1902) for the waterworks of Sœrabaya (Java).

The delivery must take place in the roads of Sœrabaya.

Specification and conditions (Bestek L^a P^s), in the Dutch or English language, and drawing may be obtained from Martinus Nyhoff, Nobel street 18, The

*The following additional details in regard to the canal are taken from La Gazette Maritime, Brussels, January 17, 1901:

"The total length of the canal will be 598 miles, 304 of which will be formed by lakes. The canal will follow the bed of the Neva as far as St. Petersburg, cross Lake Ladoga, and follow the Svir, which unites lakes Ladoga and Onega. Different water courses will then be utilized, the channels being enlarged and deepened, until the White Sea is reached at Soroskaya. It is estimated that the work will be completed in a year and will cost $10,300,000. Preliminary work has already been commenced."

†See ADVANCE SHEETS No. 966 (February 19, 1901).

Hague, Holland,* on payment of 2.50 florins in Netherlands currency ($1), which will not be returned. Stamped forms for the tender can also be obtained from the same on payment of 0.37 florin in Netherlands currency (14 cents).

The tenders, with specifications of the prices, are to be delivered at the colonial office (technical bureau), The Hague, Holland, by 12 o'clock noon on Wednesday, March 27, 1901.

The Minister for the Colonies does not bind himself to accept the lowest or any tender.

American Electric Plant in India.—Consul Fee reports from Bombay, January 10, 1901, that the steamship *Buceros*, sailing direct from the port of New York, has arrived with an electric plant and outfit and a party of engineers and electricians, representing the General Electric Company, of New York, and destined for the Kolar gold fields, near Bangalore, the capital of the native state of Mysore. The Cauvery River, adds Mr. Fee, is to be used as the source of generating the electric power, which will be conducted across the country to the Kolar gold fields. It is expected that this new power will increase the production of the mines and also lessen the cost of working. This plan is attracting considerable attention, not only from the fact that it is American, but also because it is a new departure in gold mining in India.

Cold Storage in Indian Ports.—Deputy Consul Hopley writes from Southampton, January 29, 1901:

A captain of one of the English transports recently told me that the ports of the Indian Ocean were badly equipped with cold-storage plants. Colombo, Ceylon, he instanced as a port of call for all Indian and China transports, and also for a large number of the mail steamers for Australia. The capacity of the plant at that port was 10 tons of meat per week, and it was nothing unusual for one ship to require that much. He stated further that this plant had been equipped with English machinery at a cost of about £15,000 ($72,998), but that the machinery had been tested for the English climate only, and would not work in Ceylon. He expressed surprise that Americans had not investigated the opportunity for cold-storage machinery in Indian Ocean ports.

Finances in Guadeloupe.—Consul Aymé writes from Guadeloupe, January 5, 1901, in regard to the financial condition of the bank there. He quotes from a report by Mr. Huet, a member of the French consulting committee on colonies, in regard to the danger

* Copies of specification and drawings, sent by Consul Hill, are on file in the Bureau of Foreign Commerce, where they may be examined by parties interested.

of the present system of exchange, and notes that, while the rate has been falling from year to year, with a consequent appreciation in value of paper, merchants have steadily raised their prices, thus making a double profit. For example, says the consul, a case of 10 gallons of kerosene cost, in 1898, 21 paper francs, which at the then premium of 35 per cent represented about $3 gold. The same case costs to-day 24 francs, which at the rate of 17 per cent represents $3.90 gold, or an increase in price of more than 30 per cent. Mr. Aymé repeats the warning given in a former report* and advises ship masters and owners chartering for the colony to see that their compensation should be in United States gold or its equivalent. If it is desired to express the equivalence of francs, the language should be "if in coin francs" or "if in paper francs at their bank equivalence with gold, free of all exchange, charges, or commissions."

Imitations of American Goods in Sweden.—Consul Bergh writes from Gothenburg, January 9, 1901:

My attention has been called to the forks sold by a wholesale hardware dealer of this city as American products. This fork, an inferior imitation of the original, is sold as an "American manure fork" at a price much lower than that for which a genuine American fork can be offered. This is only one sample of the many German imitations offered for sale in Sweden and represented to be "best American goods." This, of course, does great harm to the American trade, as the buyer will soon discover that he has bought an article not worth the money, and will blame the American manufacturer. It causes prejudice against everything of American make. Sweden has no law compelling the mark of origin to be placed on imported goods, and it is very easy for German exporters and Swedish importers to flood the market with this kind of goods. The Swedish law says simply that foreign-made imported goods shall not be marked, stamped, or branded so as to make the purchaser believe that the goods were manufactured in Sweden.

German Iron and Machinery Market.—Consul Barnes reports from Cologne, January 10, 1901, that the iron market continues stagnant. Foreign competition has very little chance, except under the most favorable circumstances. In the machinery market, prices are lower all around, and shipments which last year were quoted f. o. b.

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*See ADVANCE SHEETS No. 698 (April 7, 1900); CONSULAR REPORTS No. 236 (May, 1900).

factory are now quoted f. o. b. Australian and American ports. Locomotive and mining-machinery shops are busy, and considerable trade in American mining machinery is done through English agents. In regard to the latter line, the consul advises manufacturers to appoint continental agents and, in some cases, to grant licenses to manufacture to firms of good standing. This, he thinks, would not only save freight and duty, but would result in a largely increased business, as continental mine owners have great confidence in their own manufacturers. He urges upon American manufacturers the necessity of thoroughly protecting their inventions by patents before exhibiting them in the principal European countries.

How to Sell Goods in Germany.—Consul Hughes reports from Coburg, January 21, 1901:

I have already called attention to the necessity of sending bright salesmen, with a thorough knowledge of German, if we wish to introduce American goods into this country. This is especially true of the grocery and notion lines, which, if properly introduced, would find a well-paying market. Most American concerns prefer to send their goods through the German middleman, with the result that their sales are not large and the German market is flooded with worthless and impractical imitations of first-class American goods. It is useless to simply show goods in one large city; where the display will do the most good is in the small cities and towns. As an illustration of how goods introduced in this way will sell, an agent from Charleston, S. C., came here with peanuts and pop corn. He had been told that he would do no business here, as the place was too small; but he sold out his stock in just three hours and had to telegraph for extra supplies.

German Steamships for American Trade.—Consul Monaghan, of Chemnitz, under date of January 17, 1901, writes as follows:

The Hansa Steamship Company, of Bremen, proposes to establish a line of steamers from New York to South Africa and East India; and, with this end in view, nine large vessels have been ordered. The promoters of the enterprise believe that they will be able to successfully compete with the English lines running to all parts of India and Africa. The undertaking is a gigantic one and is the result of years of thought. In addition to these plans, it is proposed by the same company to establish a line from New York to Mexico and the West Indies.

American Machinery in Russia.—Under date of January 22, 1901, Consul Winter, of Annaberg, sends the following translation of an article appearing in the Deutsche Export Zeitung:

The increase in the trade of the United States with Russia is noticeable. This is due to the cordial relations which exist between these two countries and to the less friendly attitude of Russian merchants toward the manufacturers of other countries. The greater part of the orders for the Siberian Railway has been placed in the United States. Another large order, amounting to $595,000 in value, has just been placed in America for machinery to cut a tunnel of about 1½ miles in length not far from Charbin, in Manchuria. The tunnel is to be finished in one year's time. Direct connections will then be completed between Europe and Vladivostock. The United States has outdistanced Germany in the markets of Russia.

Street Cars in St. Petersburg.—Consul-General Holloway transmits the following from St. Petersburg, January 30, 1901:

The municipality of St. Petersburg has already assumed control of three of its present street-car lines and expects to take possession of the remaining lines before the 1st of March, 1901, when the authorities intend to advertise in the leading newspapers of the world for proposals to convert the same to the electrical system. The underground system will be used in the center of the city and the overhead in the suburbs. The present lines are single tracks. The fare is 5 and 6 kopecks (2.57 and 3.09 cents) for inside seats and 1 kopeck (0.5 cent) less for outside, or top, seats.

Projected Electric Road in Barcelona.—Consul-General Lay reports from Barcelona, February 12, 1901:

I am informed that Messrs. Corady y Cia. have obtained from the municipality of Barcelona a concession to build an electric railway 8 kilometers (4.9 miles) in length around the mountain of Montjuich. I understand the rails have been contracted for in Belgium. The line is not to be constructed on the trolley system; the cars are to be drawn by electric engines. The chief engineer is the Marquis Armand de Bourbon Neilson, and his address is "care of Messrs. Corady y Cia., Boria, 1 plaza Angel, Barcelona." Our electrical supply and equipment companies should correspond with him. He states that engines, accumulators, and cars are required.

French Demand for Ships' Fittings.—Consul Brittain writes from Nantes, February 7, 1901:

Yesterday Mr. Edward Kerr, of 3 rue Gresset, Nantes, called at this office requesting information regarding the largest and most responsible firms in the United States engaged in the manufacture

of ships' fittings, such as pumps, scuttles, engine-room steering telegraphs, steering apparatus, patent lavatories, water-closets, etc. There are extensive shipyards at Nantes and at St. Nazaire, west of this city, where quantities of these appliances are constantly being used, and if a determined effort is made by American manufacturers, I have reason to believe they will be able to procure substantial orders. Mr. Kerr is anxious to be placed at once in communication with the most extensive manufacturers. He has previously purchased these goods in England, but wishes to examine American products, and if satisfactory will place orders in our country.

Exhibition of Food Articles and Cooking in Belgrade.—Consul-General Guenther reports from Frankfort, February 5, 1901:

German papers publish a telegram from Belgrade, Servia, stating that an international exhibition of food articles and for cooking and hygiene will be held there in April of this year. It will be under the protectorate of the Queen of Servia. A committee has been appointed for the purpose of furnishing information to interested parties. American firms intending to exhibit should at once correspond with our consul at Belgrade* in order to secure information without unnecessary delay.

Acetylene Search Lights in Sweden.—Consul Hughes reports from Coburg, January 21, 1901:

Sweden is one of the countries in which the application of acetylene as an illuminant has already acquired considerable importance. Its use on board ship is perhaps most open to objection, since any access of water may cause an explosion. Yet acetylene search lights are being employed on the fleet of small steamers which ply between the numerous small islands with which the Swedish coast of the Baltic is dotted. During trial runs it resulted that objects could easily be examined at a distance of 500 and 600 meters (1,640 to 1,802 feet) when the acetylene beam was thrown on them, and the manipulation of the lanterns caused no difficulties. The saloons and cabins of some of these steamers are also lighted with acetylene.

Commercial Oxygen.—Under date of January 14, 1901, Consul Hughes, of Coburg, says that Professor Pictet, of Geneva, is reported to have devised a plan by which oxygen can be produced on a commercial scale and at a cost that will greatly increase its use. By this method air is admitted into a condenser, the condenser being

*Christian Vögeli, vice-consul-general, Belgrade, Servia.

cooled by liquid air. The low temperature causes the oxygen to separate by gravity from the nitrogen of the air. It is then drawn off from the bottom of the condenser and the nitrogen from the top, while any carbonic acid present, made liquid by the low temperature, is drawn into tubes. As a 500-horsepower engine will make 500,000 feet of oxygen a day, it seems that the process is not expensive.

Tourists' Postal Cards in Germany.—Consul Diederich, of Bremen, under date of January 28, 1901, writes in regard to the popularity of tourists' postal cards in that country. There is no city nor hamlet, he says, no place of historical interest, but has cards embellished with some design appropriate to the locality, which offer convenient means of communication with friends at home. Last summer, according to post-office returns, 20,808,313 cards were mailed in one week. Forty-six per cent were tourists' cards. The postage collected daily on these cards averaged about $15,845.33. Berlin furnished the largest quota—137,000 cards. Next followed Dresden, with 38,000; then Hamburg, Cologne, Leipzig, Breslau, Frankfort, Hanover, Halle, Düsseldorf Wiesbaden, and Kiel. Bremen stood thirteenth in the list, with a daily average of 8,584 postals.

Noninflammable Rubber Tubing.—Consul Hughes, of Coburg, Germany, reports that Müller & Korte, of Pankow, near Berlin, have brought out a new kind of rubber tubing, to be used in cases where damage to the rubber is to be feared either from the flame itself or by contact with hot dishes or stands. The rubber tube is sheathed with asbestus and the asbestus coated with incombustible paint, lest the fibers should peel off. The tubing remains pliable and can be cut as before. Burners with such rubber tubes may be placed on sand baths or hot stoves. The protection is, of course, not absolute; for when the heat becomes too strong the rubber inside will give way. The well-known pipes with metallic spirals were originally made with the same object, but they have found other useful applications, and they differ from these new tubes by being hard and inclined to break; once leaky, they can not be mended.

A New Alloy in Germany.—Consul Albert writes from Brunswick in regard to magnalium, a new alloy of aluminum and magnesium, with a percentage of from 2 to 30 per cent of the latter metal. Magnalium, it seems, is free from the bad qualities of aluminum,

while it retains its light weight, firmness, and tenacity. It is especially applicable in the automobile industry, in electro-technics, aëronautics, and dentistry. It can be worked with the file, lathe, and planing machine; it is also admirable as a solder, and its pliability adapts it as a border for lenses and eyeglasses. Magnalium is absolutely weatherproof and does not rust.

English Wages in the Iron Trade.—Consul McFarland sends the following from Nottingham, dated January 28, 1901:

Incidental to the general discussion of American competition in iron and steel and the effect of that competition on the British industry, it is suggestive to note that on Saturday, January 26, the men employed at the Denby Iron Furnaces, near Derby, received fourteen days' notice to leave their work. It is officially stated that the object is to bring the men's wages down to the old level and increase the hours of working. There appears to be a combination among the employers, and many hundreds of workmen are affected.

Electrical Works in Amsterdam.—Consul Hill sends from Amsterdam, January 28, 1901, statement of the conditions governing the acceptance of bids for the construction and installation of the electric works in that city, including a power plant, dynamos, etc., for the central station.* The illustrations, description, etc., transmitted by Consul Hill have been filed for reference in the Bureau of Foreign Commerce, where they may be consulted by interested parties.

Nobel Peace Prize.†—The Department is informed by the Nobel committee, elected by the Norwegian Storthing and charged with the bestowal of the Nobel prize destined for "the person having done the most, or the best, in the work of establishing the brotherhood of nations, for the suppression or the reduction of standing armies, as well as for the formation and the propagation of peace conferences," that presentation of candidates for the prize must be made before the 1st of April next. According to the regulations, every proposal must be accompanied by the writings and

*See ADVANCE SHEETS No. 935 (January 15, 1901).

†See ADVANCE SHEETS No. 841, September 24, 1900 (CONSULAR REPORTS No. 243, December, 1900). See also note immediately following.

other documents upon which it is founded. For admission to the competition, it is necessary to be proposed in writing by a qualified person. Letters of proposal should be addressed to the Norwegian Nobel Committee, Victoria Terrasse, 3, Christiania, Sweden.

Correspondence with the Nobel Institute.—The Department has received a note from the legation of Sweden and Norway, dated Washington, February 2, 1901, stating that the managers of the Nobel fund* of Stockholm have been authorized to correspond directly with interested parties abroad without using the channel of the Ministry of Foreign Affairs at Stockholm.

Irish Demand for Coal-Discharging Apparatus.—Acting Consul-General Westacott writes from London, February 1, 1901:

I am in receipt of an inquiry for names of American firms supplying machinery and appliances for the mechanical discharge of coal from ships. Any firm wishing to communicate on this subject should address the secretary of the Londonderry port and harbor, Londonderry, Ireland.

American Electric Trams in Auckland.—Consul Dillingham writes from Auckland, January 2, 1901:

For more than three years, Auckland has discussed the advisability of introducing an electric-tramway system. Several contracts have been granted to local firms and to London syndicates, but the change has not been made. A New York company has now arranged to build the road. Rails, cars, and other material will be brought from America, as well as a force of men to equip and put it into operation. The cost of the line will be about $1,000,000.

Demand for American Electric Accessories.—Consul Marshal Halstead, of Birmingham, under date of January 25, 1901, says he has been requested to announce that an English electric-supply company wishes to open up correspondence with American manufacturers of electric accessories. Further information may be had by applying to the consul reporting.

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*See ADVANCE SHEETS No. 841 (September 24, 1900); CONSULAR REPORTS No. 243 (December, 1900).

Mining Company in Peru.—Minister Dudley transmits from Lima, January 16, 1901, copy of the prospectus of a company recently formed in that city, with a nominal capital of 500,000 soles ($243,500), to drain the inundated mines in the region of Cerro de Pasco. The prospectus has been filed for reference in the Bureau of Foreign Commerce.

Mining Company in Liberia.—Minister Smith writes from Monrovia, January 22, 1901:

The Liberian Legislature has just passed an act granting to the Liberia Union Mining Company the sole right of mining and building railroads, wharves, telegraph and telephone lines in the counties of Montserrado and Maryland for a certain period of years. The company has sold its rights to English capitalists, the matter being negotiated through Henry F. Downing, late United States consul at Loanda, Portuguese West Africa, but now of London.

Consular Reports Transmitted to Other Departments.—The following reports from consular officers (originals or copies) have been transmitted since the date of the last report to other Departments for publication or for other action thereon:

Consular officer reporting.	Date.	Subject.	Department to which referred.
L. L. Stang, Saigon	Jan. 20, 1901	Report of rice market	Department of Agriculture.
O. J. D. Hughes, Coburg	Jan. 10, 1901	Childrens' growth in school.	Bureau of Education.
C. B. Hurst, Vienna	Feb. 2, 1901	Census of Vienna	Census Office.
J. L. Bittinger, Montreal	Feb. 22, 1901	Tuberculosis conference	Marine-Hospital Service.
Do	Feb. 21, 1901	Census of Canada	Census Office.
Do	Feb. 25, 1901	Marriages, births, and deaths of Montreal.	Marine-Hospital Service.
E. T. Liefeld, Freiburg	Jan. 31, 1901	Population of Germany	Census Office.
W. Schumann, Mainz	Jan. 26, 1901	Vital statistics	Marine-Hospital Service.
M. Halstead, Birmingham	Feb. 21, 1901	Condition of pen workers	Department of Labor.
R. Guenther, Frankfort	Feb. 2, 1901	Norwegian census	Census Office.
Do	Feb. 4, 1901	Population of Vienna, Budapest, and Berlin.	Do.
Do	Feb. 23, 1901	Emigration via German ports.	Bureau of Immigration.
Do	Feb. 25, 1901	Letter boxes in Germany	Post-Office Department.
F. H. Mason, Berlin	Feb. 27, 1901	Population of Germany	Census Office.
J. H. Grout, Valletta	Feb. 23, 1901	Wireless telegraphy	Navy Department.
S. M. Taylor, Glasgow	Feb. 20, 1901	Parliamentary elections and expenses in Great Britain.	Civil Service Commission.
M. W. Gibbs, Tamatave	Jan. 23, 1901	Labor system of Madagascar.	Department of Labor.

FOREIGN REPORTS AND PUBLICATIONS.

Traffic Routes in Bolivia.—The following data are taken from the Nachrichten für Handel und Industrie, Berlin, January 19, 1901:

The main routes in Bolivia, arranged according to their length, are: Cochabamba–Sucre, 202 miles; La Paz–Oruro, 152 miles; Tarija–Tupiza, 143 miles; Oruro–Cochabamba, 127 miles; Potosi–Sucre, 90 miles; La Paz–Corocoro, 68 miles; Challapata–Sucre, 62 miles; Oruro–Lagunillas, 59 miles; and La Paz–Puerto Perez, 47 miles.

There is only one railway line working in Bolivia—the Oruro—connecting it with Antofagasta, Chile, a narrow-gauge road 575 miles long. An extension 22 miles long branches off to the mines of Huanchaca. It is intended to extend the Antofagasta–Oruro line from Oruro over the Corocoro to La Paz. The length of the entire road will be 764 miles. Other railway lines planned are: From La Paz to Desaguadero in junction with the line from Oruro; from Colquechaca to the Oruro–Antofagasta road; from Oruro to Cochabamba and to the Beni River; from Tupiza, Cotagaita to Potosi (a continuation of the Argentine line from Jujuy); from Potosi to Uyuni; from Beni to Santa Cruz, Oruro, La Paz, as well as to the Aguiri and Punis rivers; finally, from Puerto Perez to La Paz. It is said that a company is to be created in London which will have charge of the construction of the road from Oruro to Cochabamba. The interest of the capital necessary will be guaranteed by a national rent.

Trade in Manila.—The following is summarized from the Revue du Commerce Extérieur, Paris, November and December, 1900:

The markets of Manila present now a more animated appearance, and English houses show the greatest activity in reestablishing the course of business. Great Britain in 1899 remained at the head of commercial affairs. Japan and China have always been largely represented in the commerce of this colony. Japan has its own line of steamers—the Nippon Yuson Kaisha—connecting it with the Philippines, from which it received large quantities of sugar, abaca, and other products and supplied in return the numerous Japanese articles which ornament the houses of Manila and even of the provinces. One important change in the trade of Manila is the high price of all foreign goods and another is the decision taken by all the merchants of Manila to provide themselves directly from the United States with all the articles of importation manufactured in that country which have a chance of being sold in the Philippines. For the present, the chief articles of American importation are food products, paper, office furniture, jewelry, clocks, watches, hardware, etc. Common soap is an article of trade for which there must be considerable demand. The khaki uniforms need energetic washing, and the products used

by the Chinese laundries are poor and injurious, but cheap. The importation of men's hats, both of straw and felt, continues, and the sale of boots and shoes is as lively as ever.

There is no demand for wall paper. The insides of houses are either stained or painted. Stationery supplies do not always show a good assortment, but now American manufacturers are being represented in the market. The daily press of Manila, composed of American, English, Spanish, and Indian newspapers, consume an amount of paper largely in excess of that of former years. A year ago four French houses, one Swiss, and one Italian held the trade in jewelry and silversmith goods. A new firm has just been added, but the demand is for articles of moderate price. As to toys, some years ago seven out of ten articles were French and the remainder German; now the proportion is reversed. Furniture sales are confined mostly to beds, tables, and chairs from China and Japan. Porcelain, china, and glass ware find ready sale on account of the establishment of numerous hotels and restaurants, and later on the refurnishing of houses will increase the demand for these articles. Articles for electric lighting have not had the sale that the importers hoped, since the one electric company of Manila can not extend this means of illumination to private houses: Most of these articles come from Germany, Austria, and the United States. Owners of houses are obliged by order of the military administration to put in order all real estate left without repairs for the last two or three years. Purchases of cement, tiles, bricks, plaster, lime, etc., have greatly increased since this order.

Trade and Industry of Greenland.—The Board of Trade Journal, London, January 3, 1901, says:

The Danish colonies on the west coast of Greenland extend from about 60° to about 72° north latitude. A mission and trading station was also established in 1894 at Angmagsalik, on the east coast of Greenland. At this latter place, however, only a limited trade in Greenland productions takes place, chiefly in bear-skins, together with a few fox and seal skins, and in a commercial sense this trading station is of no special importance.

Until the year 1830, the Greenland trade had many misfortunes to fight against, but from that year it has yielded a regular annual surplus. It is monopolized by the State, and only Government vessels are allowed to sail in Greenland waters. The west coast of Greenland, between the sixtieth and seventy-third degrees of latitude, is closed to navigation by the vessels of foreign nations, and by Danish vessels unless with the permission of the Danish Government. For foreign travelers, also, Greenland is a closed country, unless the traveler has obtained permission of the Government, a permission, however, which is very seldom given, and only in cases where the person concerned is backed by his own Government.

The monopoly of the trade is said to protect the Greenlander from being deceived by unscrupulous merchants. The administration settles the price both for the goods the Greenlanders purchase and for the products they sell. The members of the administration are enjoined to take care that the natives do not leave themselves short of produce by selling more than they can dispense with, so that they shall not be destitute of the needful food and clothing when the slack time arrives. It is stated that the native Greenlander never has been, neither is he now, able to purchase a single drop of spirits from the administration.

The exportation from Denmark to Greenland consists chiefly of provisions, fire-arms and ammunition, dry and woolen goods, rope work, tools and implements, hardware, stone and earthen ware, tobacco, and woolen goods. The importation from Greenland consists exclusively of Greenland productions—seal oil, seal skins, bear and fox skins, and eiderdown. Seal blubber is first boiled down at the various trading stations, and exported in that form. In Denmark, the oil is still further refined and put upon the market as light-brown and brown seal oil. A third quality, which has undergone a further boiling and refining process, is known as "three-crown oil." The Greenland seal oil is everywhere recognized as excellent and unadulterated. As a safeguard against imitations, every cask of seal oil must, on delivery, have the bunghole closed with the seal of the Greenland company. About 10,000 casks of seal oil are produced annually, of which about one-fifth is light-brown oil. Whale, cod, and carrion oil are exported from Greenland to Denmark. About 30,000 seal skins are exported to Denmark annually; they are resorted in Denmark according to fixed rules. About 100 skins of polar bears are obtained yearly. There are two kinds of foxes—the blue and the white Arctic. The annual exportation amounts to an average of 1,400 blue and 1,200 white skins; they are sold as a rule in bundles of 10. Eiderdown is bought in Greenland in the same state in which it is found in the nest; it is very carefully cleansed in Denmark and sold as "pure eiderdown" and "down waste." The pure eiderdown is much in demand; at present, only about 150 pounds of pure eiderdown are produced annually.

Other products exported are feathers, tusks of the narwhal, and small whalebone. With the exception of seal oil, the goods of the Greenland company are sold at auctions, which are held in Copenhagen in the months of May and November; the fox-and-bear-skin auction is held in February.

Commerce of Tripoli.—A recent edition of the Nachrichten für Handel und Industrie, Berlin, says:

The trade of Tripoli during the year 1899 shows no important changes in comparison with that of the preceding year. The imports were valued at $1,781,680 and the exports at $1,957,985. The trade was distributed among the principal countries as follows:

Country.	Imports.	Exports.
Great Britain	$636,900	$723,750
France	366,700	318,450
Italy	173,700	38,600
Turkey	164,000	125,450
Austria-Hungary	154,400	33,775
Germany	106,150	14,726
Belgium	61,725	29,915
Egypt	43,425	77,200
Tunis	15,440	38,600
Netherlands	3,860	11,580
United States	.....	289,500
Greece	.....	96,500
Malta	.....	96,500

The chief articles of import were:

Article.	Value.	Article.	Value.
Alcohol	$24,125	Colors	$9,650
Coffee	55,970	Leather and hides	23,160
Raw silk	16,791	Flour and groats	250,900
Candles	14,475	Gold and silver braid	9,650
Colonial wares and drugs	96,500	Matches	10,615
Cordage	15,440	Woolen textiles	61,725
Articles of clothing	11,580	Dried vegetables	38,600
Wood and charcoal	30,880	Hardware	15,440
Building materials	41,495	Petroleum	10,615
Fancy goods	11,580	Rice	46,320
Brandy, liquor, and wine	11,580	Cotton yarn and textiles	463,200
Paper	11,580	Sugar	100,360
Soap	15,440	Glassware	14,475
Silk and silk goods	44,197	Silver in bars	24,125
Tobacco	159,225		

The chief articles of export from Tripoli were:

Article.	Value.	Article.	Value.
Alfa (esparto)	$466,192	Barley	$96,404
Worked silver	28,950	Goat, sheep, and camel skins	115,800
Cattle	67,550	Tanned skins from the Sudan	279,850
Butter	14,475	Cotton textiles	11,580
Wool	11,580	Sponges	270,200
Mats	9,650	Ostrich feathers	308,800
Oranges and lemons	19,300	Eggs	46,320
Carbonate of sodium	19,300	Woolen textiles	38,600
Fresh fruit	11,580	Dates	15,440
Ivory	22,195		

Silk Production in the Levant.—According to the Revue d'Orient, the year 1899 showed a remarkable advance in the silk production of the Levant over that of preceding years. The following figures give the production of raw silk for the last five years:

	Tons.
1895	1,093
1896	1,346
1897	1,241
1898	1,346
1899	1,538

The production of the year 1899 was distributed among the following districts:

	Tons.
Anatolia	486
Syria	456
Salonica	210
Bulgaria	42
Greece	34
Caucasus	310

Railway in Palestine.—The Nachrichten für Handel und Industrie, Berlin, January 19, 1901, says:

The Beirut–Damascus Railway was built to meet the necessities of trade between the two places. The revenues are large and would certainly leave a profit if the company could free itself from its great burden of debt—some $11,580,000. The road must go into liquidation sooner or later, as it can not continue with a yearly deficit of nearly $24,000. The acquisition of this railway with all its privileges (including the concession for an extension to Aleppo under Government guaranty) for $4,000,000, or at the most $5,000,000, would make possible a good dividend and merits the attention of enterprising investors.

The building of the Haifa–Hauran–Damascus Railway has come to a standstill, and it would not appear that the builder intends to complete it.

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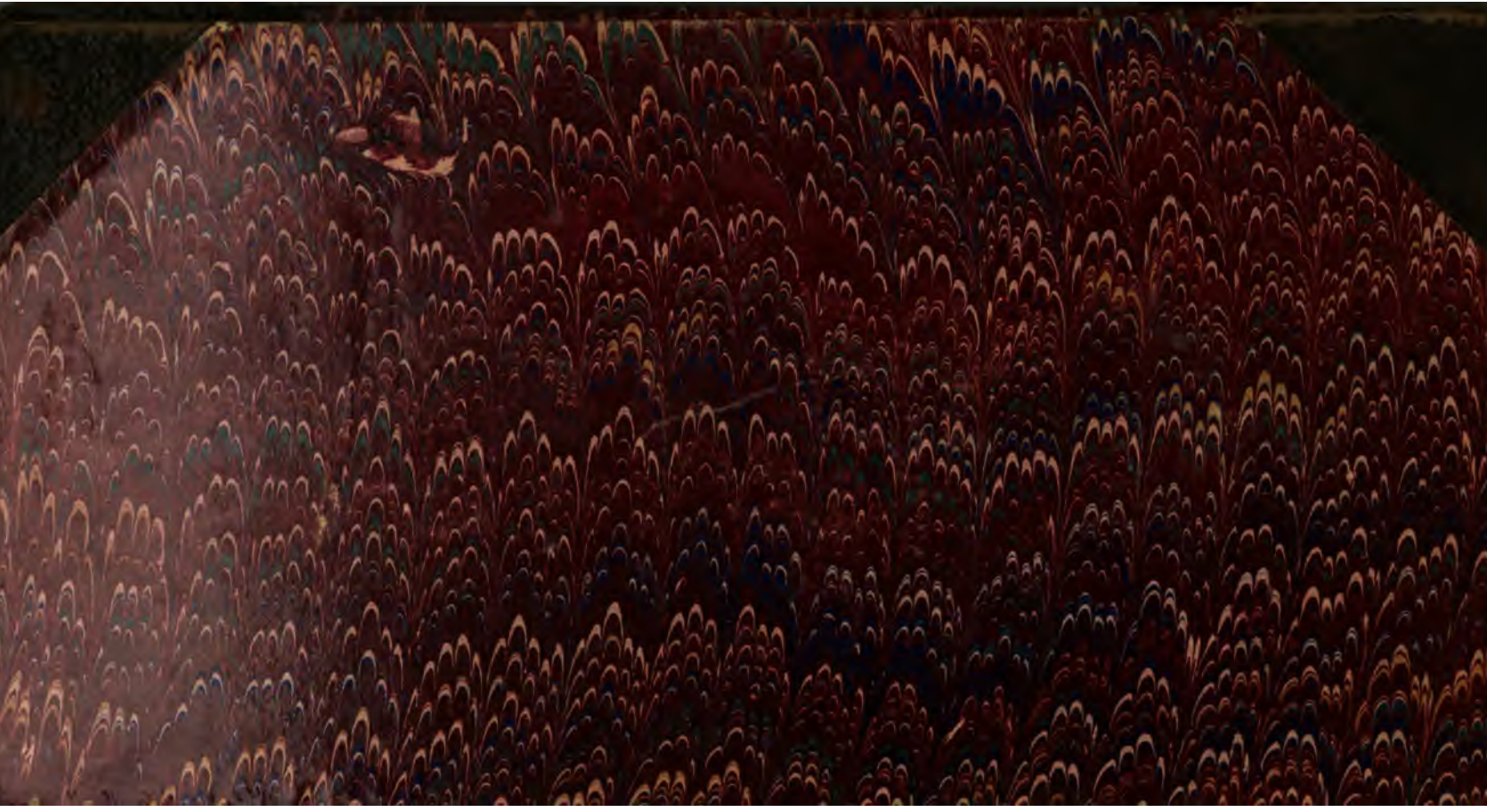
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